


STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING						FORM 3 AMENDED REPORT <input type="checkbox"/>				
<b>APPLICATION FOR PERMIT TO DRILL</b>						1. WELL NAME and NUMBER NBU 922-34G4CS-R				
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES				
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES				
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6100				
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL Andy.Lytle@anadarko.com				
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0149077			11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>				
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')				
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
20. LOCATION OF WELL	FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN			
LOCATION AT SURFACE	1345 FNL 764 FEL		SENE	34	9.0 S	22.0 E	S			
Top of Uppermost Producing Zone	2578 FNL 1821 FEL		SWNE	34	9.0 S	22.0 E	S			
At Total Depth	2578 FNL 1821 FEL		SWNE	34	9.0 S	22.0 E	S			
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 1821		23. NUMBER OF ACRES IN DRILLING UNIT 600					
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1285		26. PROPOSED DEPTH MD: 9099 TVD: 8834					
27. ELEVATION - GROUND LEVEL 4854			28. BOND NUMBER WYB000291		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496					
<b>Hole, Casing, and Cement Information</b>										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2270	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 9099	11.6	I-80 LT&C	12.0	Class G	290	3.38	12.0
							Class G	1270	1.31	14.3
<b>ATTACHMENTS</b>										
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
NAME Joel Malefyt			TITLE Regulatory Analyst			PHONE 720 929-6828				
SIGNATURE			DATE 10/06/2015			EMAIL joel.malefyt@anadarko.com				
API NUMBER ASSIGNED 43047554580000			APPROVAL  Permit Manager							



**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 922-34G4CS-R**

Surface: 1345 FNL / 764 FEL      SENE  
BHL: 2578 FNL / 1821 FEL      SWNE

Section 34 T9S R22E

Uintah County, Utah  
Mineral Lease: UTU-0149077

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,056'	
Birds Nest	1,373'	Water
Mahogany	1,819'	Water
Wasatch	4,230'	Gas
Mesaverde	6,555'	Gas
Sego	8,801'	Gas
TVD	8,834'	
TD	9,099'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

1/10/2013

RECEIVED: October 06, 2015



**6. Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8834' TVD, approximately equals  
5,389 psi 0.61 psi/ft = actual bottomhole gradient

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Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,469 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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Per Onshore Order No. 2 - Max Anticipated Surf. Press. (MASP) = (Pore Pressure at next csg point -  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

**10. Other Information:**

Please refer to the attached Drilling Program.

1/10/2013

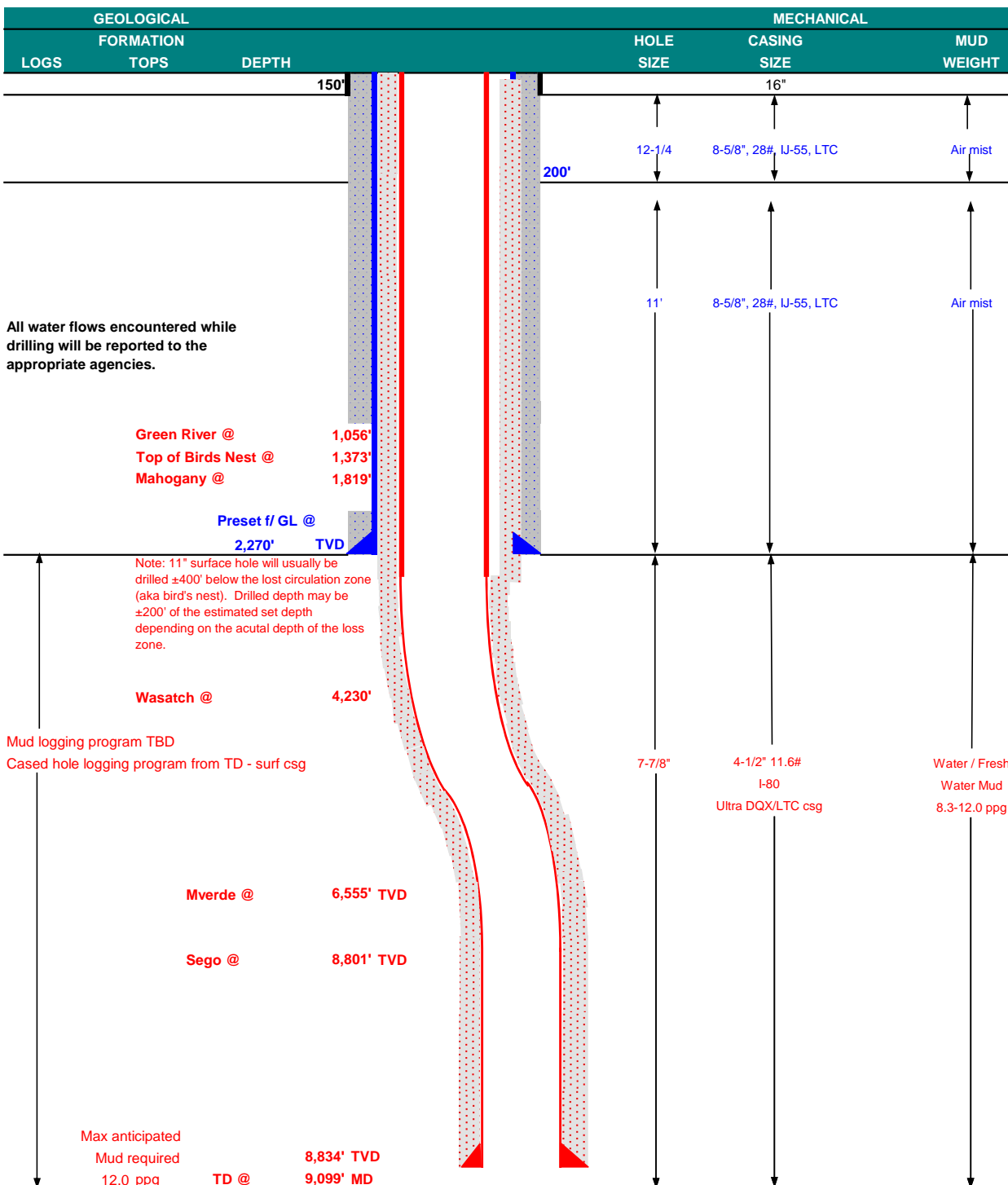
RECEIVED: October 06, 2015





## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	January 10, 2013		
WELL NAME	NBU 922-34G4CS-R	TD	8,834'	TVD	9,099' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SENE	1345 FNL	764 FEL	Sec 34	T 9S R 22E
	Latitude: 39.996072	Longitude: -109.419429	NAD 83		
BTM HOLE LOCATION	SWNE	2578 FNL	1821 FEL	Sec 34	T 9S R 22E
	Latitude: 39.992696	Longitude: -109.423200	NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.				







## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						LTC		DQX	
						BURST	COLLAPSE	TENSION	
CONDUCTOR	16"	0-150'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,270	28.00	IJ-55	LTC	2.38	1.77	6.25	N/A
						7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.15		3.10
						7,780	6,350	223,000	267,035
	4-1/2"	5,000 to 9,099'	11.60	I-80	LTC	1.11	1.15	5.74	

**Surface Casing:**

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe  
 Fracture at surface shoe with 0.1 psi/ft gas gradient above  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient  
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80		1.15
Option 1								
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80		1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2								
	LEAD	1,770'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,729'	Premium Lite II + 0.25 pps celloflake + .4% FL-52 + .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II + 1.2% Sodium Metasilicate + .05 lbs/sk Static Free	290	35%	12.00		3.38
	TAIL	5,370'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free + 1.2% Sodium Metasilicate + .5 % EC-1 +.002 gps FP-6L + 2% Bentonite II	1,270	35%	14.30		1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

**DRILLING ENGINEER:**

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

DATE: \_\_\_\_\_

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE: \_\_\_\_\_



Found 1977  
Brass Cap,  
Pile of Stones.

N89°53'19"W - 2642.34' (Meas.)

Found 1977  
Brass Cap in  
Pile of Stones.

N0°03"W - 40.12 (G.L.O.)  
N00°02'53"W - 2648.27' (Meas.)

**WELL LOCATION:**  
**NBU 922-34G4CS-R**

ELEV. GRADED GROUND = 4855.2'

Found 1977  
Brass Cap in  
Pile of Stones.

Well Surface  
Position

**N00°01'36"W (Basis of Bearings)**  
2646.38' (Measured)  
NORTH - 40.07 (G.L.O.)

1.36°W (basis of Be  
2646.38' (Measured)  
NORTH - 40.07 (G.L.O.)

Found 1977  
Brass Cap,  
Pile of Stones.

Found 1977  
Brass Cap,  
Pile of Stones.

N0°03'W - 40.11' (G.L.O.)  
N00°03'15"W - 2647.27' (Meas.)

34

1821<sup>1</sup>

NBU 922-34G4CS-R (Surface Position)

NAD 83 LATITUDE = 39.996072° (39° 59' 45.859")  
 LONGITUDE = 109.419429° (109° 25' 09.946")  
 NAD 27 LATITUDE = 39.996107° (39° 59' 45.984")  
 LONGITUDE = 109.418747° (109° 25' 07.489")

NBU 922-34G4CS-R (Bottom Hole)

NAD 83 LATITUDE = 39.992696° (39° 59' 33.707")  
 LONGITUDE = 109.423200° (109° 25' 23.519")  
 NAD 27 LATITUDE = 39.992731° (39° 59' 33.832")  
 LONGITUDE = 109.422517° (109° 25' 21.062")

Found 1977  
Brass Cap,  
Pile of Stones.

N89°58'50"E - 2646.48' (Meas.)  
N89°56'E - 40.10 (G.L.O.)

Found 1977 Brass  
Cap. Pile of Stones.

N89°59'55"E - 2646.95' (Meas.)  
EAST - 40.11 (G.L.O.)

NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
3. The Bottom of hole bears S40°38'17"W 1621.53'  
from the Surface Position.
4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
5. Bearings and Distances are based upon a Local Cartesian Grid,  
oriented to Geodetic North at the North 1/4 Corner of Section  
8, T10S, R22E, S.L.B.&M. The Grid having a mean project  
height of 5300'. Lineal units used are U.S. Survey Foot.
6. Basis of elevation is Tri-Sta "Two Water" located in Lot 4 of  
Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta  
is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as  
being 5238'.

A horizontal scale bar with a central point labeled '0'. To the left of '0', there is a tick mark labeled '500'' and a further tick mark labeled '1000''. To the right of '0', there is a tick mark labeled '1000''. The bar is divided into segments by these tick marks. The segments are filled with different patterns: the leftmost segment (0 to 500') is white with horizontal lines; the segment from 500' to 0' is white with vertical lines; the segment from 0' to the first 1000' mark is white with diagonal lines; and the segment from the first 1000' mark to the second 1000' mark is solid black. The word 'SCALE' is centered below the bar.

### SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR  
REGISTRATION No. 6028691  
STATE OF UTAH

WELL PAD: NBU 922-34H

**NBU 922-34G4CS-R**  
**WELL PLAT**

2578' FNL, 1821' FEL (Bottom Hole)  
SW  $\frac{1}{4}$  NE  $\frac{1}{4}$  OF SECTION 34, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.

**CONSULTING, LLC**  
1095 Saberton Ave.  
Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

# TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 5-14-12	SURVEYED BY: A.F.	SHEET NO:  <b>3</b>  3 OF 20
DATE DRAWN: 6-15-12	DRAWN BY: J.G.C.	
SCALE: 1" = 1000'	Date Last Revised: 9-23-15 M.W.W.	

RECEIVED: October 06, 2015



WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-34H4CS	39°59'45.415"	109°25'09.913"	39°59'45.539"	109°25'07.456"	1390' FNL	39°59'35.246"	109°25'06.474"	39°59'35.371"	109°25'04.017"	2419' FNL
NBU 922-34H4BS-R	39.995949°	109.419420°	39.995983°	109.418738°	762' FEL	39.993124°	109.418465°	39.993159°	109.417782°	494' FEL
NBU 922-34H4BS-R	39°59'45.562"	109°25'09.924"	39°59'45.687"	109°25'07.467"	1375' FNL	39°59'38.546"	109°25'06.474"	39°59'38.671"	109°25'04.017"	2085' FNL
NBU 922-34G4CS-R	39.995990°	109.419423°	39.996024°	109.418741°	763' FEL	39.994041°	109.418465°	39.994075°	109.417782°	494' FEL
NBU 922-34G4CS-R	39°59'45.859"	109°25'09.946"	39°59'45.984"	109°25'07.489"	1345' FNL	39°59'33.707"	109°25'23.519"	39°59'33.832"	109°25'21.062"	2578' FNL
NBU 922-34G4BS-R	39.996072°	109.419429°	39.996107°	109.418747°	764' FEL	39.992696°	109.423200°	39.992731°	109.422517°	1821' FEL
NBU 922-34G4BS-R	39°59'45.958"	109°25'09.954"	39°59'46.082"	109°25'07.496"	1335' FNL	39°59'36.997"	109°25'23.519"	39°59'37.122"	109°25'21.062"	2245' FNL
NBU 922-34H1CS-R	39.996099°	109.419432°	39.996134°	109.418749°	765' FEL	39.993610°	109.423200°	39.993645°	109.422517°	1821' FEL
NBU 922-34H1CS-R	39°59'46.056"	109°25'09.961"	39°59'46.180"	109°25'07.503"	1326' FNL	39°59'41.836"	109°25'06.473"	39°59'41.961"	109°25'04.016"	1752' FNL
NBU 922-34H1BS-R	39.996181°	109.419433°	39.996161°	109.418751°	765' FEL	39.994954°	109.418465°	39.994989°	109.417782°	494' FEL
NBU 922-34H1BS-R	39°59'46.155"	109°25'09.968"	39°59'46.280"	109°25'07.511"	1316' FNL	39°59'45.136"	109°25'06.473"	39°59'45.260"	109°25'04.016"	1418' FNL
NBU 922-34A4CS-R	39.996154°	109.419436°	39.996189°	109.418753°	766' FEL	39.995871°	109.418465°	39.995906°	109.417782°	494' FEL
NBU 922-34A4CS-R	39°59'46.253"	109°25'09.975"	39°59'46.378"	109°25'07.518"	1306' FNL	39°59'48.436"	109°25'06.473"	39°59'48.560"	109°25'04.016"	1084' FNL
NBU 922-34A4BS-R	39.996209°	109.419437°	39.996216°	109.418755°	767' FEL	39.996788°	109.418465°	39.996822°	109.417782°	494' FEL
NBU 922-34A4BS-R	39°59'46.352"	109°25'09.982"	39°59'46.476"	109°25'07.525"	1296' FNL	39°59'51.726"	109°25'06.473"	39°59'51.850"	109°25'04.016"	751' FNL
NBU 922-34A4BS-R	39.996209°	109.419440°	39.996243°	109.418757°	767' FEL	39.997702°	109.418465°	39.997736°	109.417782°	494' FEL
CIGE 212	39°59'45.711"	109°25'09.935"	39°59'45.835"	109°25'07.478"	1360' FNL					
	39.996031°	109.419426°	39.996065°	109.418744°	763' FEL					

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

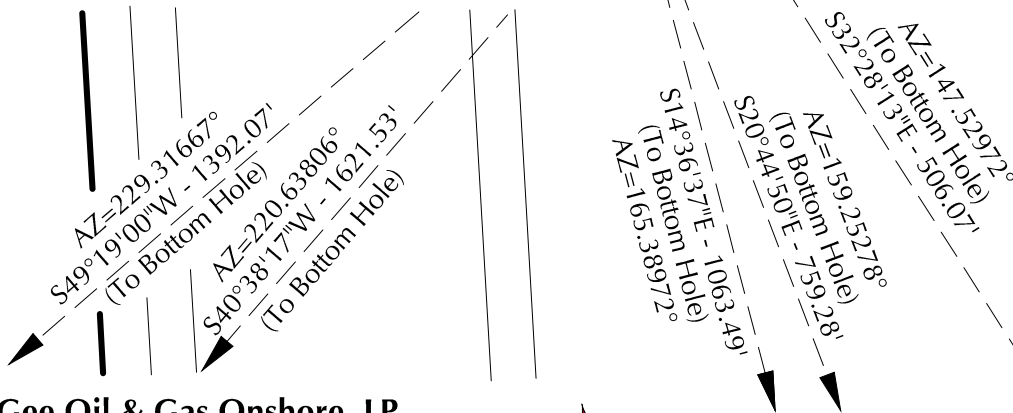
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-34H4CS	-1,029.1'	268.3'	NBU 922-34H4BS-R	-710.0'	269.0'	NBU 922-34G4CS-R	-1,230.5'	-1,056.1'	NBU 922-34G4BS-R	-907.5'	-1,055.6'
NBU 922-34H1CS-R	-427.0'	271.7'	NBU 922-34H1BS-R	-103.0'	272.1'	NBU 922-34A4CS-R	221.0'	272.5'	NBU 922-34A4BS-R	544.1'	272.9'

BASIS OF BEARINGS IS THE EAST LINE OF THE NE  $\frac{1}{4}$  OF SECTION 34, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°01'36"W.

Az. to Exist. W.H.=176.71056° 65.0' NBU 922-34A4BS-R  
 Az. to Exist. W.H.=176.71778° 55.0' NBU 922-34A4CS-R  
 Az. to Exist. W.H.=176.70556° 45.0' NBU 922-34H1BS-R  
 Az. to Exist. W.H.=176.68944° 35.0' NBU 922-34H1CS-R  
 Az. to Exist. W.H.=176.64694° 25.0' NBU 922-34G4BS-R  
 Az. to Exist. W.H.=176.66028° 15.0' NBU 922-34G4CS-R

EXISTING WELL: CIGE 212  
 Az. to Exist. W.H.=356.74639° 15.0' NBU 922-34H4BS-R

Az. to Exist. W.H.=356.70861° 30.0' NBU 922-34H4CS



**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 922-34H**

**WELL PAD INTERFERENCE PLAT**  
 WELLS - NBU 922-34H4CS, NBU 922-34H4BS-R,  
 NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
 NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
 NBU 922-34A4CS-R & NBU 922-34A4BS-R  
 LOCATED IN SECTION 34, T9S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
 1095 Saberton Ave.  
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 Phone 307-674-0609  
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**TIMBERLINE**

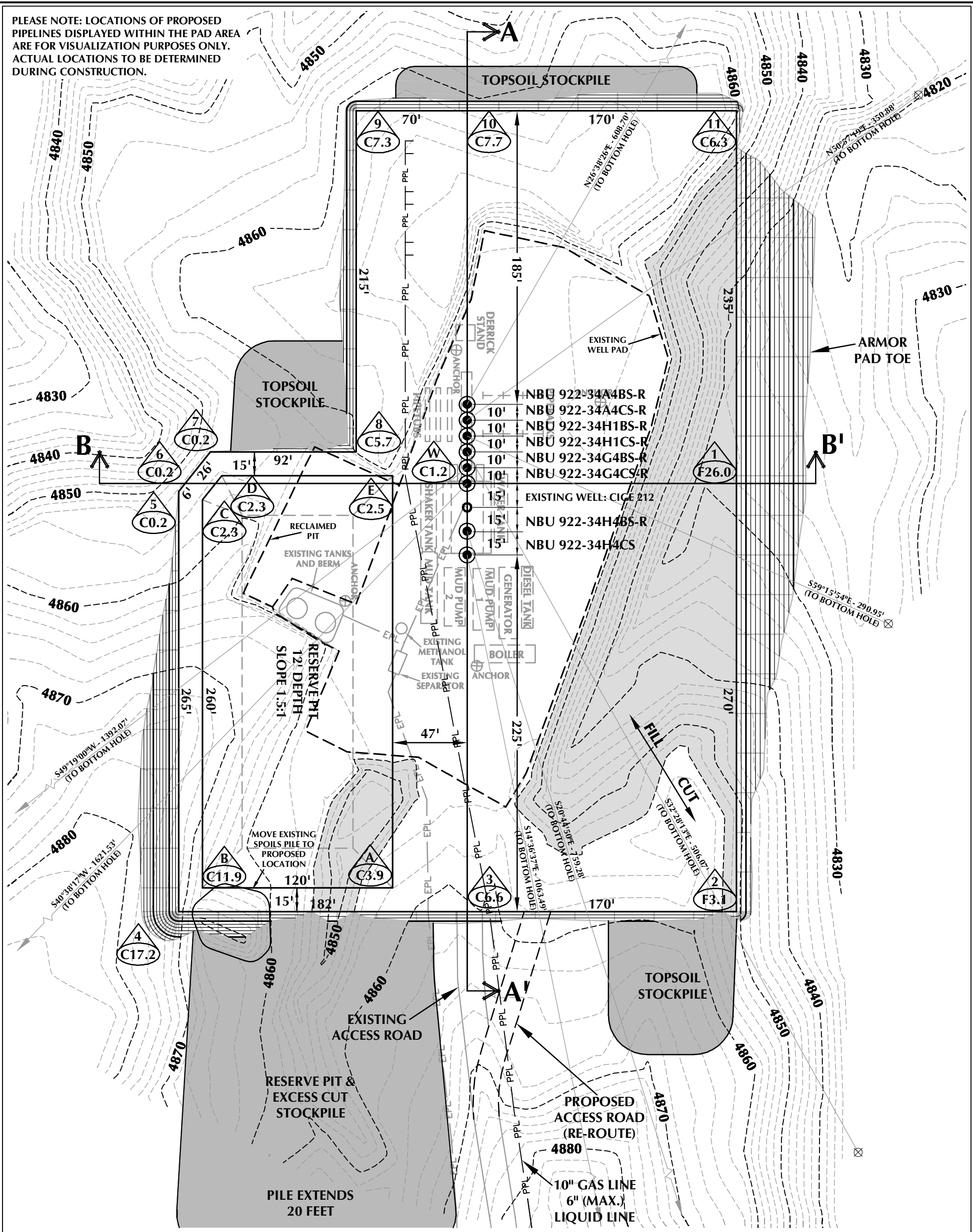
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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 5-14-12	SURVEYED BY: A.F.	SHEET NO: <b>9</b> 9 OF 20
DATE DRAWN: 6-15-12	DRAWN BY: J.G.C.	
SCALE: 1" = 60'	Date Last Revised: 9-23-15 M.W.W.	



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.



WELL PAD - NBU 922-34H DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4855.2'  
FINISHED GRADE ELEVATION = 4854.0'  
CUT SLOPES = 1:1  
FILL SLOPES = 1.5:1  
TOTAL WELL PAD AREA = 4.12 ACRES  
TOTAL DISTURBANCE AREA = 5.26 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-34H

WELL PAD - LOCATION LAYOUT  
NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC  
1095 Saberton Avenue  
Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 24,007 C.Y.  
TOTAL FILL FOR WELL PAD = 22,745 C.Y.  
TOPSOIL @ 6" DEPTH = 2,465 C.Y.  
EXCESS MATERIAL = 1,262 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT  
+/- 11,000 C.Y.  
RESERVE PIT CAPACITY (2' OF FREEBOARD)  
+/- 42,230 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



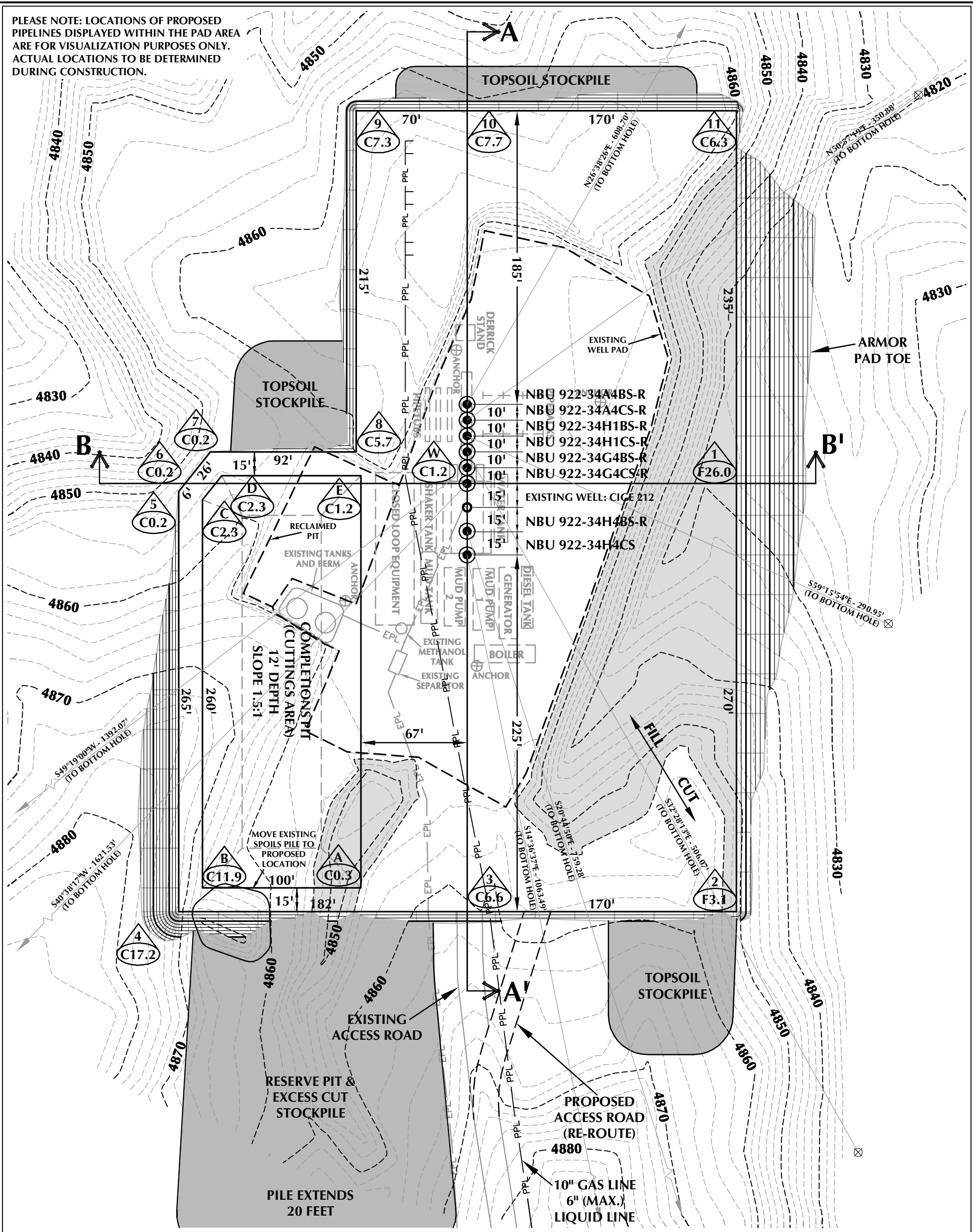
HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

SCALE: 1"=60' DATE: 7/10/12 SHEET NO: 10 OF 20  
REVISED: SJM 9/24/15

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078  
(435) 789-1365



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.



WELL PAD - NBU 922-34H (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4855.2'  
FINISHED GRADE ELEVATION = 4854.0'  
CUT SLOPES = 1:1  
FILL SLOPES = 1.5:1  
TOTAL WELL PAD AREA = 4.12 ACRES  
TOTAL DISTURBANCE AREA = 5.26 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-34H

WELL PAD - LOCATION LAYOUT  
NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UINAH COUNTY, UTAH



CONSULTING, LLC  
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Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 24,007 C.Y.  
TOTAL FILL FOR WELL PAD = 22,745 C.Y.  
TOPSOIL @ 6" DEPTH = 2,465 C.Y.  
EXCESS MATERIAL = 1,262 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT  
+/- 33,770 C.Y.  
COMPLETIONS PIT CAPACITY  
(2' OF FREEBOARD)  
+/- 8,870 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



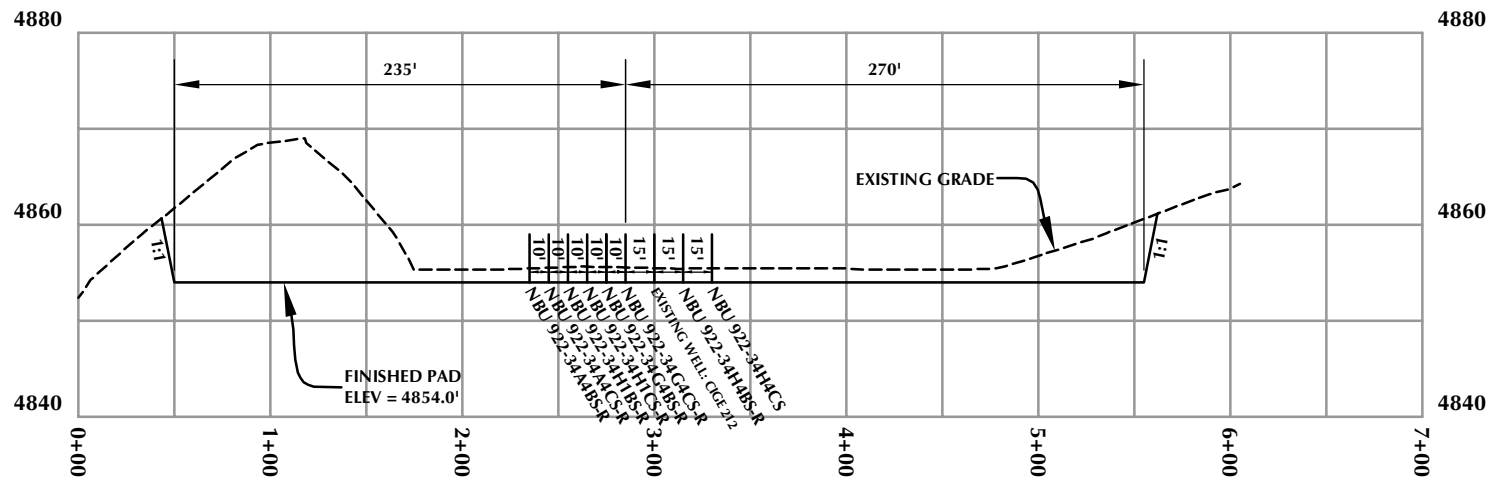
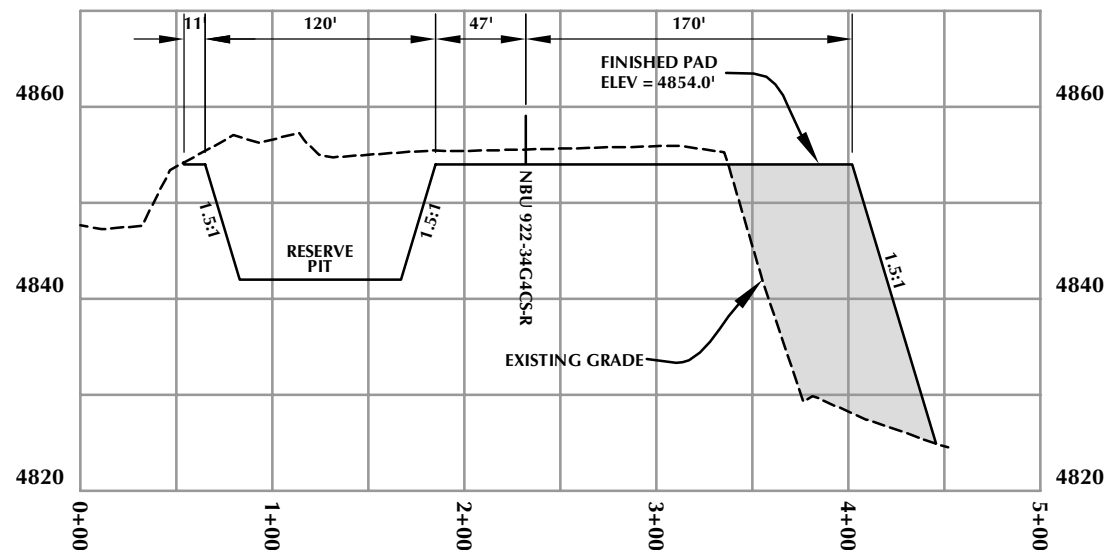
HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

SCALE: 1"=60' DATE: 9/19/12 SHEET NO: 10B 10B OF 20  
REVISED: SJM 9/24/15

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



**CROSS SECTION A-A'****CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT WIDTH  
AND DEPTH.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 922-34H**

**WELL PAD - CROSS SECTIONS**  
NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



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**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**HORIZONTAL** 0 50' 100' 1" = 100'  
**VERTICAL** 0 10' 20' 1" = 20'

Scale: 1"=100'  
REVISED:

Date: 7/10/12  
SJM  
9/24/15

SHEET NO:

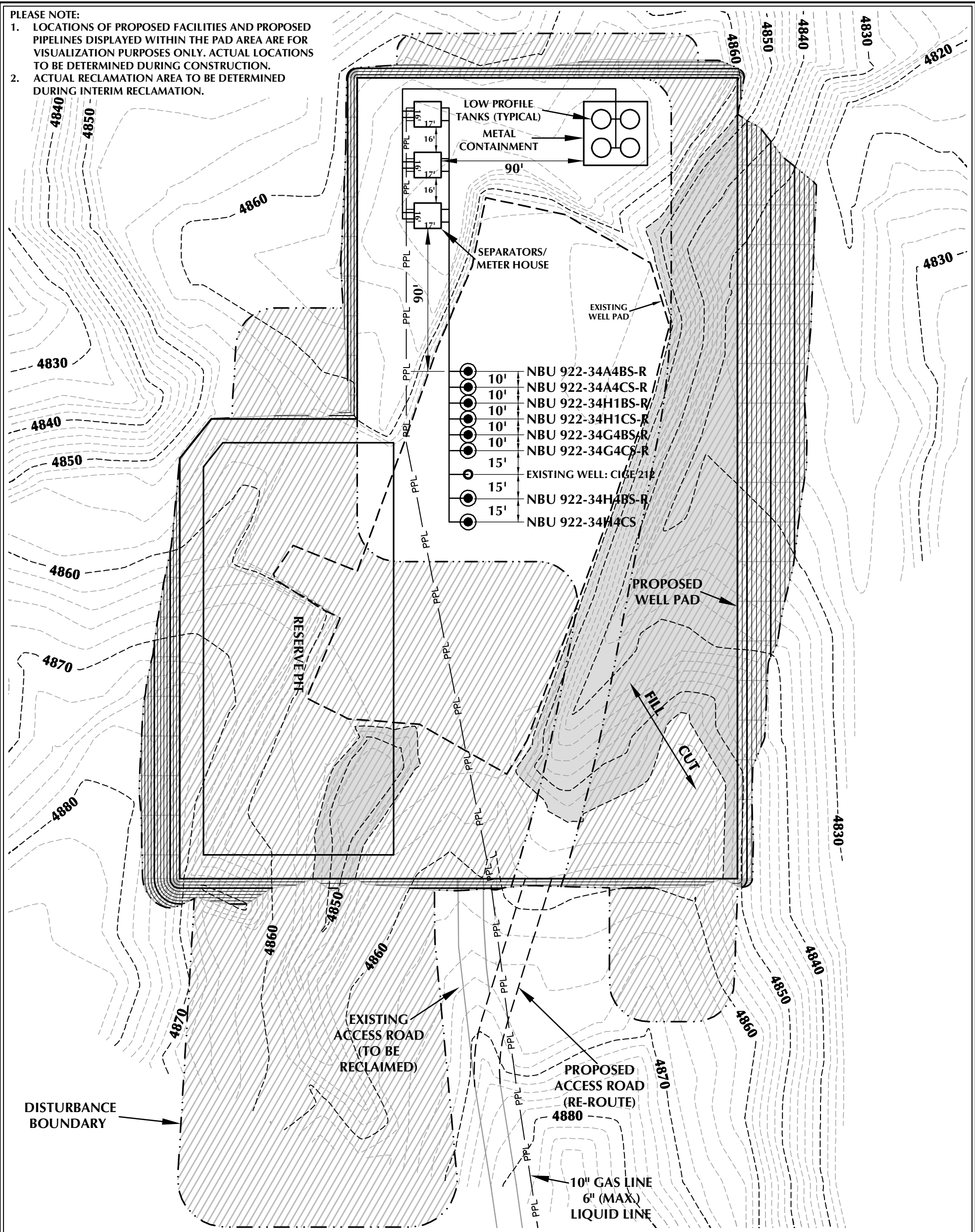
**11**

11 OF 20

RECEIVED: October 06, 2015



- PLEASE NOTE:
- LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
  - ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.



WELL PAD - NBU 922-34H DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.26 ACRES (INCLUDING EXISTING)  
RECLAMATION AREA = 3.76 ACRES  
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.50 ACRES

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-34H

WELL PAD - RECLAMATION LAYOUT  
NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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TIMBERLINE  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL PROPOSED PIPELINE
- EPL EXISTING PIPELINE
- RECLAMATION AREA



HORIZONTAL 0 30' 60' 1" = 60'

2' CONTOURS

SCALE: 1"=60' DATE: 7/10/12 SHEET NO: 12 12 OF 20  
REVISED: SJM 9/24/15



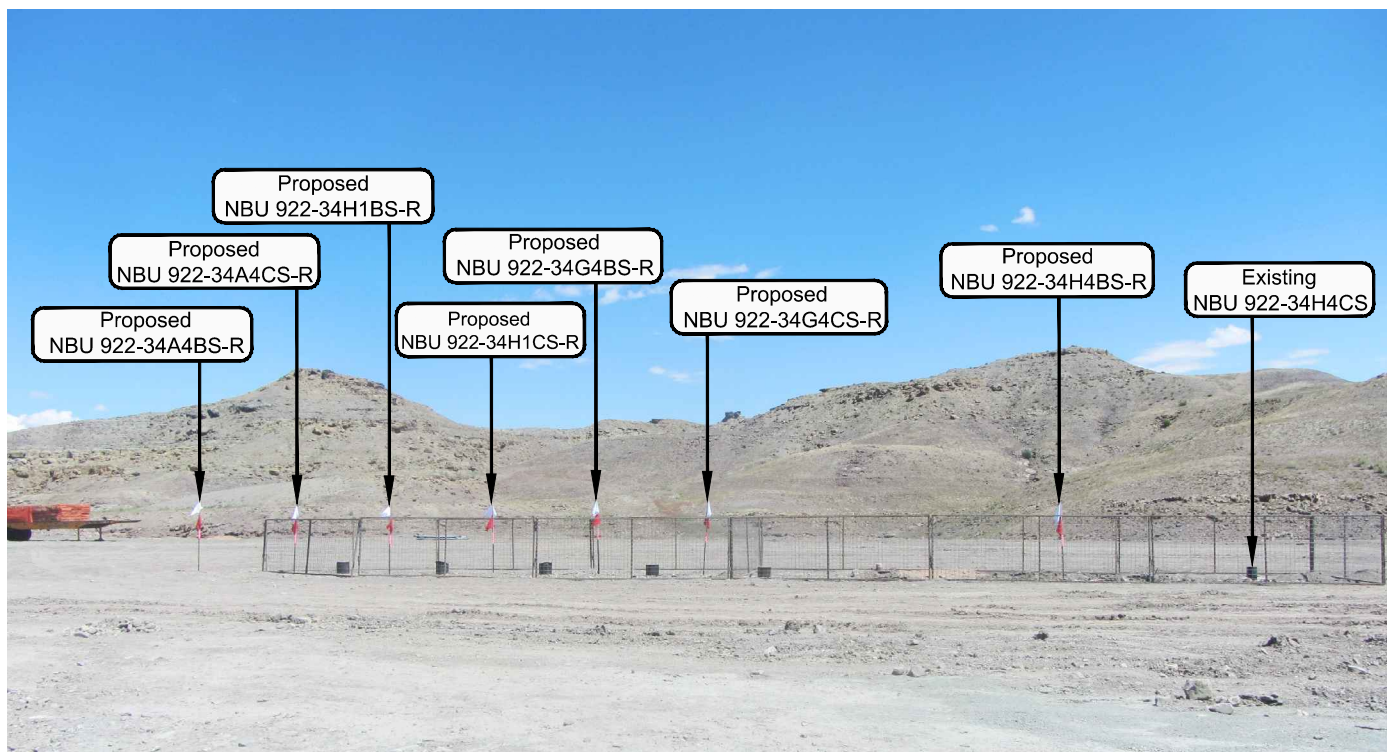


PHOTO VIEW: FROM LOCATION STAKE TO CORNER #1

CAMERA ANGLE: EASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 922-34H**

**LOCATION PHOTOS**  
NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., Uintah County, Utah.



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**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN:  
5-14-12

PHOTOS TAKEN BY: A.F.

SHEET NO:

DATE DRAWN:  
6-15-12

DRAWN BY: J.G.C.

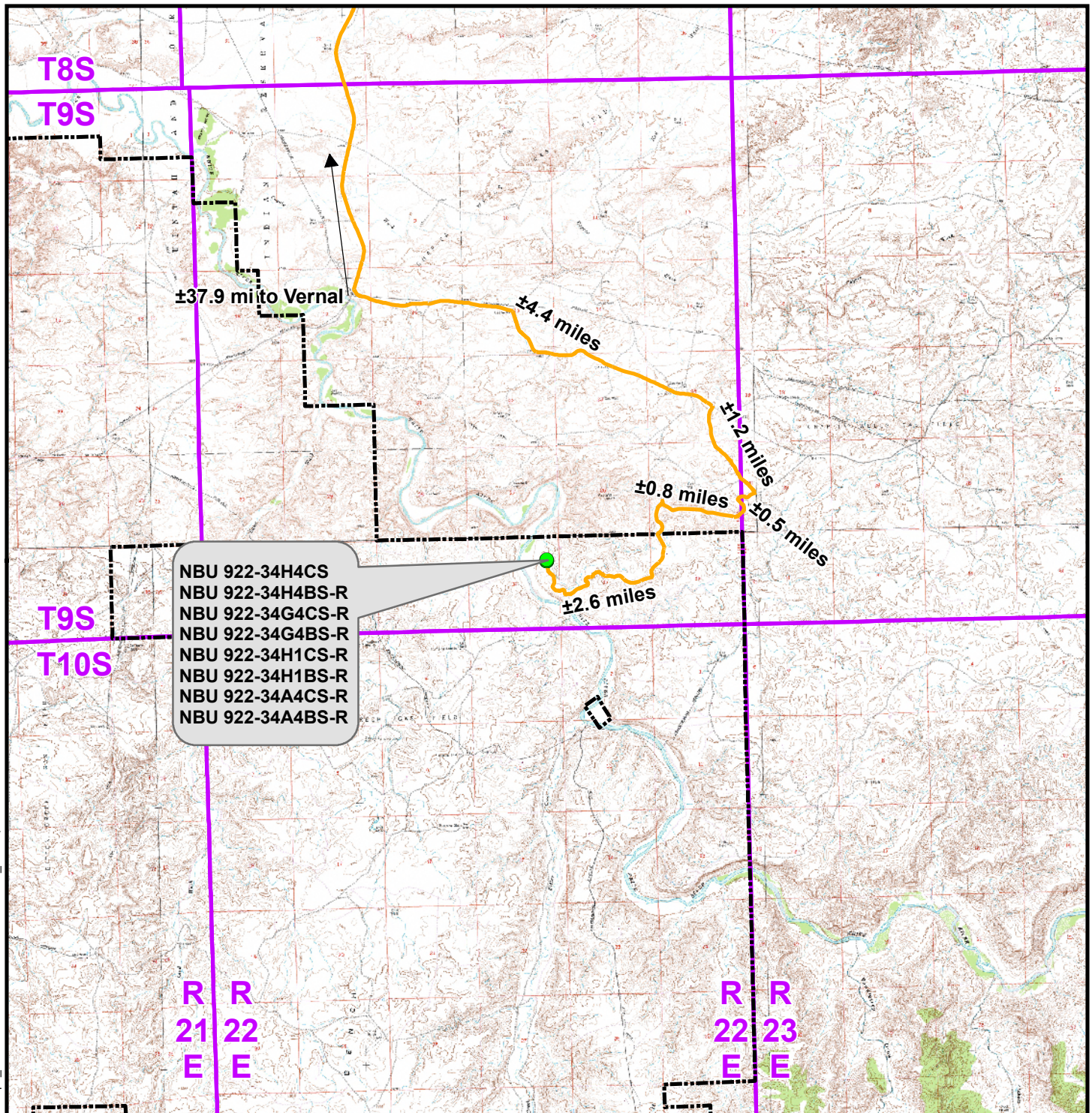
**13**

Date Last Revised: 9-23-15 M.W.W.

13 OF 20

RECEIVED: October 06, 2015





### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 922-34H To Unit Boundary: ±1,311ft

### WELL PAD - NBU 922-34H

#### TOPO A

NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
Gas Onshore L.P.**

1099 18th Street  
Denver, Colorado 80202



**CONSULTING, LLC**

1095 Saberton Ave.  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182



SCALE: 1:100,000

DRAWN: TL

REVISED: JD

NAD83 USP Central

DATE: 5 July 2012

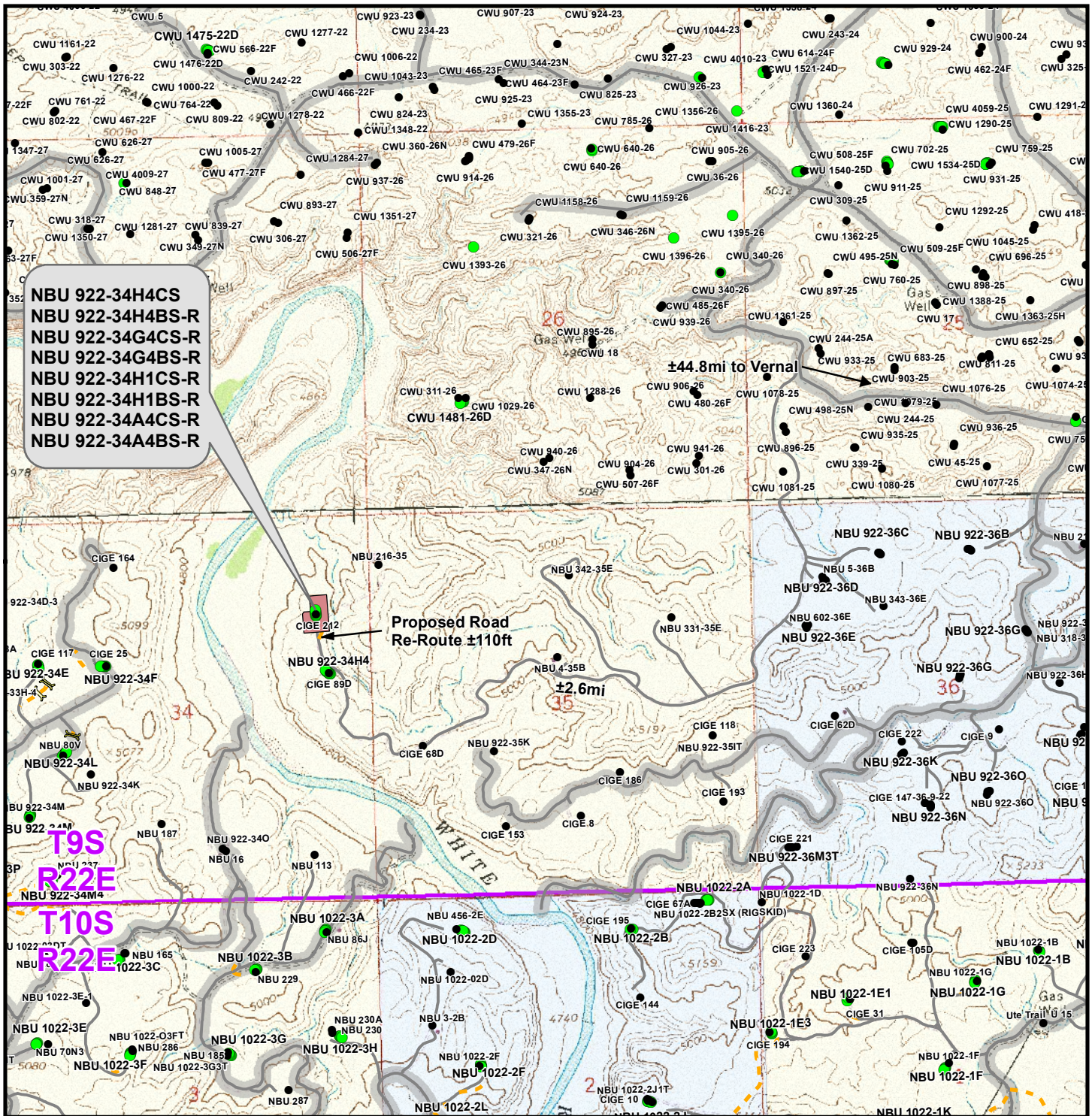
DATE: 24 Sept 2015

SHEET NO:

**14**

14 OF 20





**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Culvert/LWC - Proposed
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed Road Re-Route Length: ±110ft

**WELL PAD - NBU 922-34H**

**TOPO B**

NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
Gas Onshore L.P.**

**1099 18th Street  
Denver, Colorado 80202**



**CONSULTING, LLC**

1095 Saberton Ave.  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED: JD

NAD83 USP Central

DATE: 5 July 2012

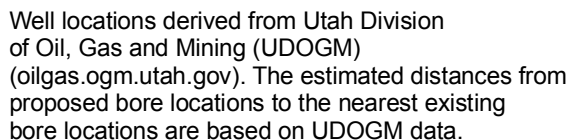
DATE: 24 Sept 2015

SHEET NO:

**15**

15 OF 20





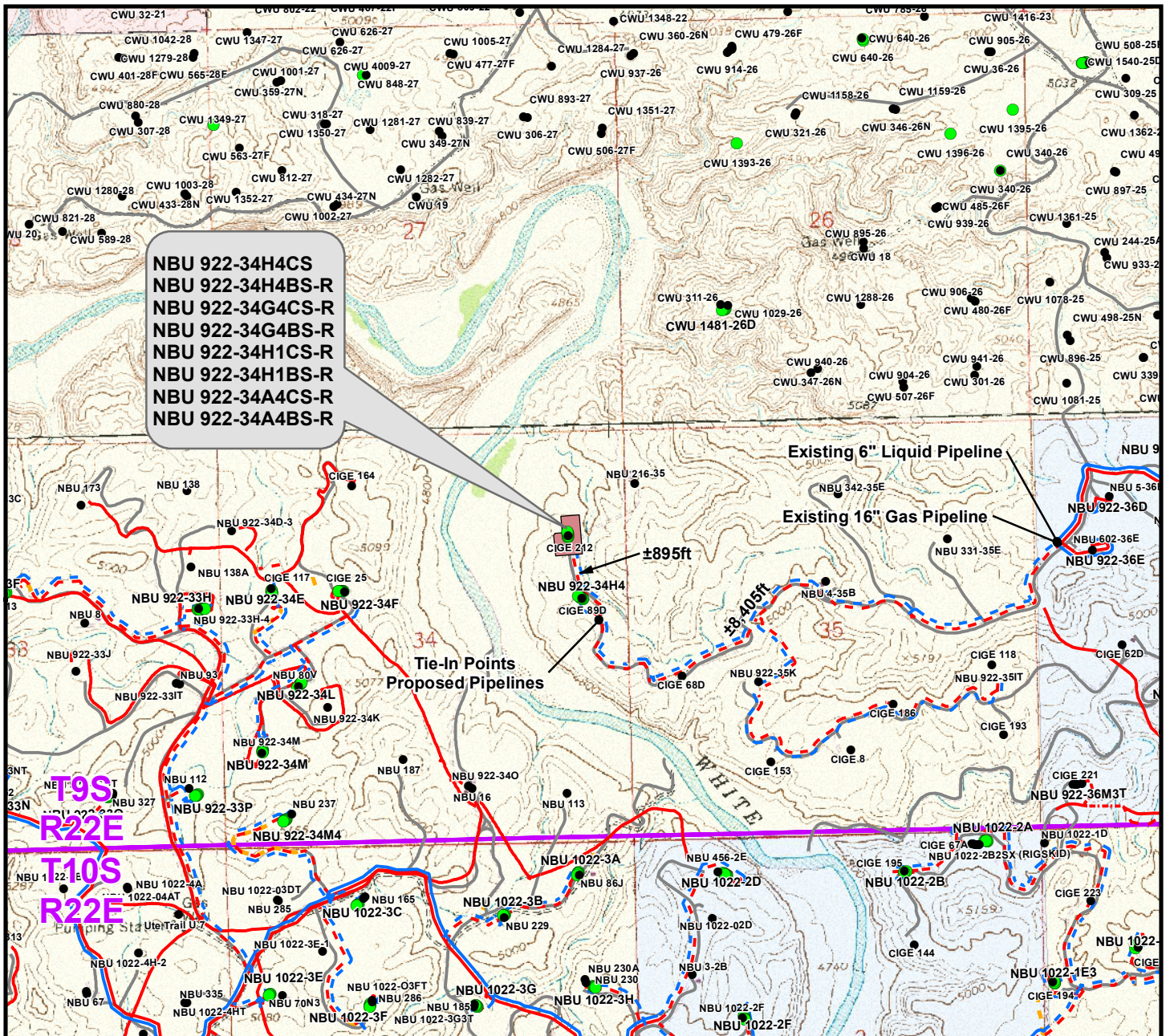
### Legend

- ## TOPO C



16 OF 20





Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±200ft
Buried 6" (Max.) (Edge of Pad to 34H4 Intersection)	±895ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,095ft</b>

Proposed Gas Pipeline	Length
Buried 10" (Meter House to Edge of Pad)	±200ft
Buried 10" (Edge of Pad to 34H4 Intersection)	±895ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,095ft</b>

### Legend

● Well - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management	■ State
● Well - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation	■ Private
■ Well Pad	- - - Gas Pipeline - Existing				

### WELL PAD - NBU 922-34H

#### TOPO D

NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., Uintah County, Utah

### Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street  
Denver, Colorado 80202



### CONSULTING, LLC

1095 Saberton Ave.  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED: JD

NAD83 USP Central

DATE: 18 Sept 2012

DATE: 24 Sept 2015

SHEET NO:

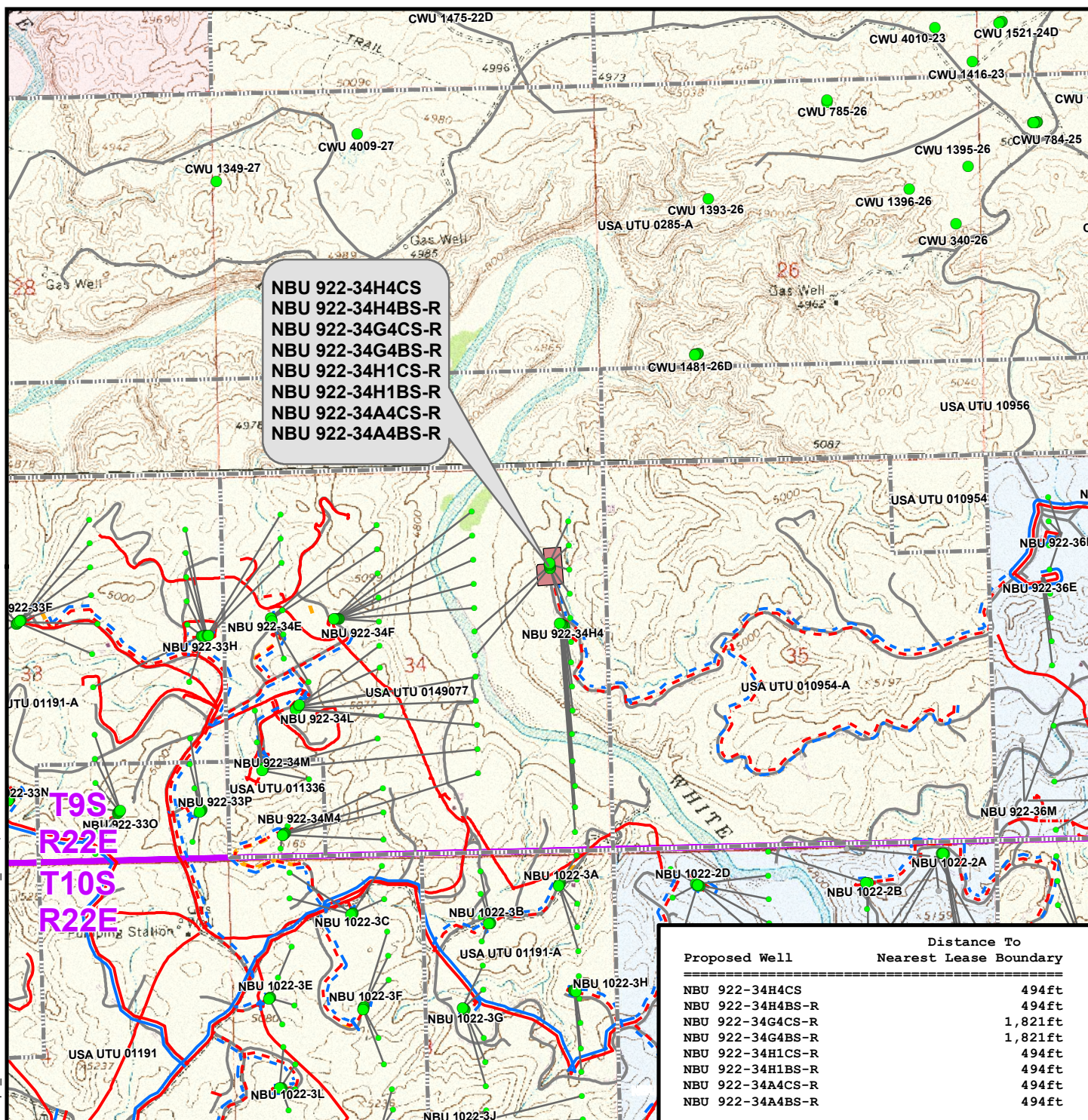
**17**

17 OF 20









## Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▬ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

## WELL PAD - NBU 922-34H

## TOPO E

NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
LOCATED IN SECTION 34, T9S, R22E,  
S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &  
Gas Onshore L.P.**

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Denver, Colorado 80202



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1095 Saberton Ave.  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED: JD

NAD83 USP Central

DATE: 18 Sept 2012

DATE: 24 Sept 2015

SHEET NO:

**19**

19 OF 20



**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 922-34H  
WELLS – NBU 922-34H4CS, NBU 922-34H4BS-R,  
NBU 922-34G4CS-R, NBU 922-34G4BS-R,  
NBU 922-34H1CS-R, NBU 922-34H1BS-R,  
NBU 922-34A4CS-R & NBU 922-34A4BS-R  
Section 34, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidler Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidler Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420) to the south. Exit right and proceed in a southerly, then southeasterly direction along the Seven Sisters Road approximately 1.2 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly then southerly direction along the Class D County Road approximately 0.5 miles to a second Class D County Road to the west. Exit right and proceed in a westerly, then northwesterly direction along the second Class D County Road approximately 0.8 miles to a service road to the south. Exit left and proceed in a southerly, then westerly, then northwesterly direction along the service road approximately 2.6 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.4 miles in a southerly direction.



# **ANADARKO PETROLEUM CORP**

**UINTAH COUNTY, UTAH (NAD 27)**

**SEC. 34 T9S R22E (NBU 922-34H PAD)**

**NBU 922-34G4CS-R**

**ORIGINAL WELLBORE**

**23 September, 2015**

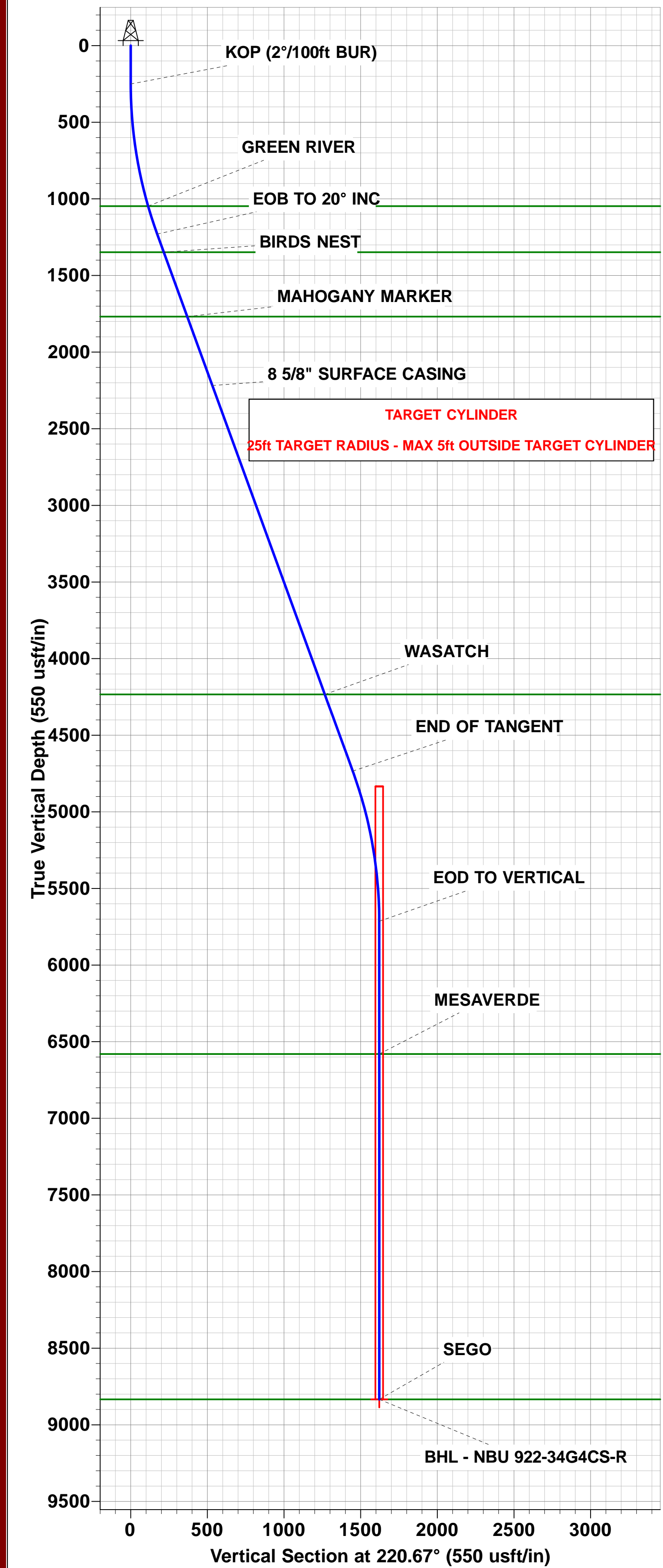
**Plan: PROPOSAL #1**



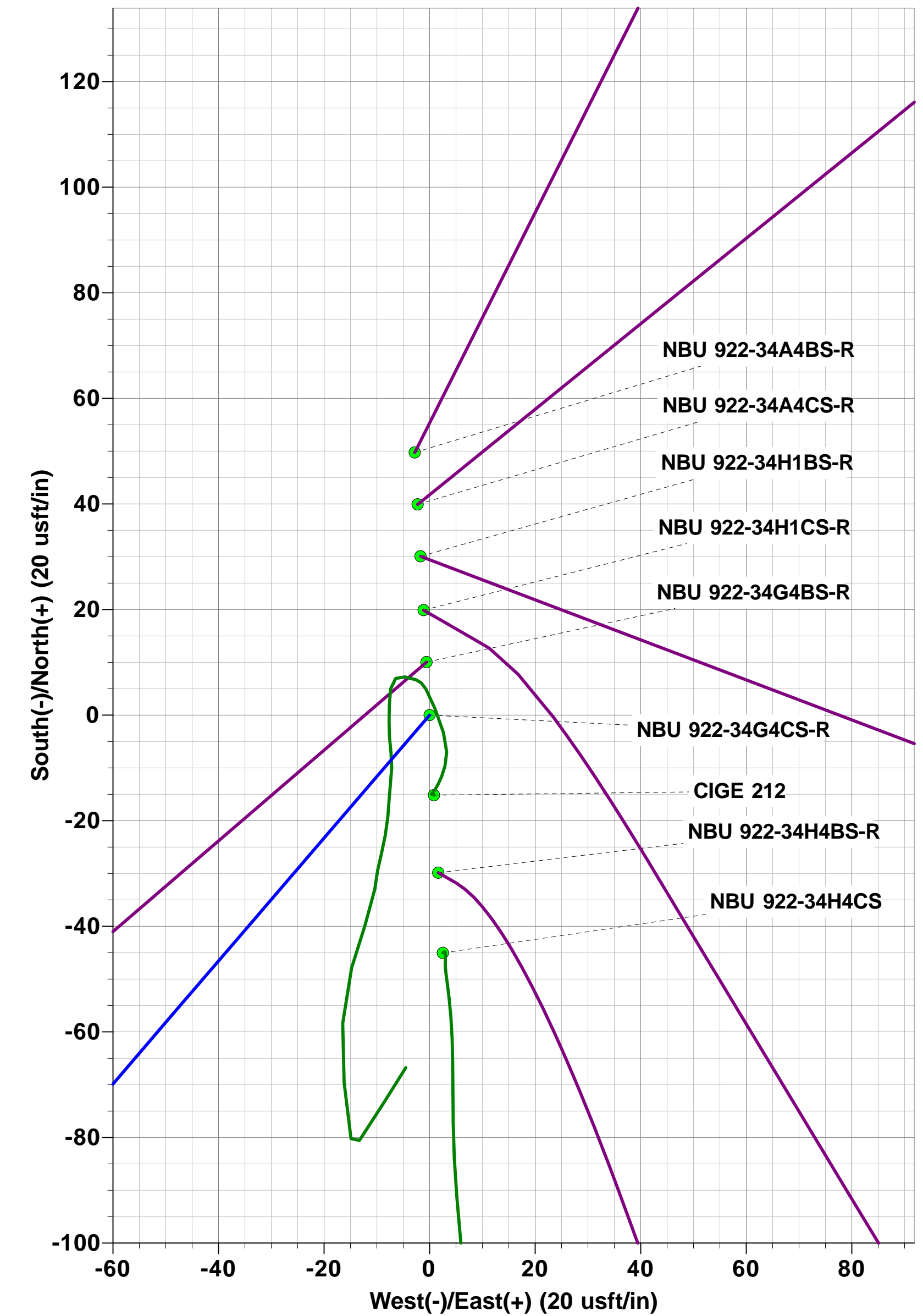


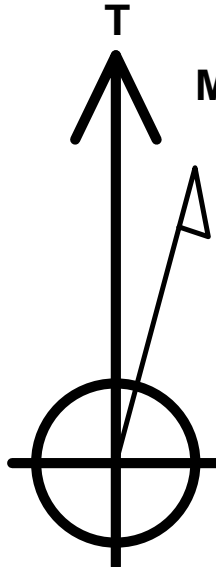


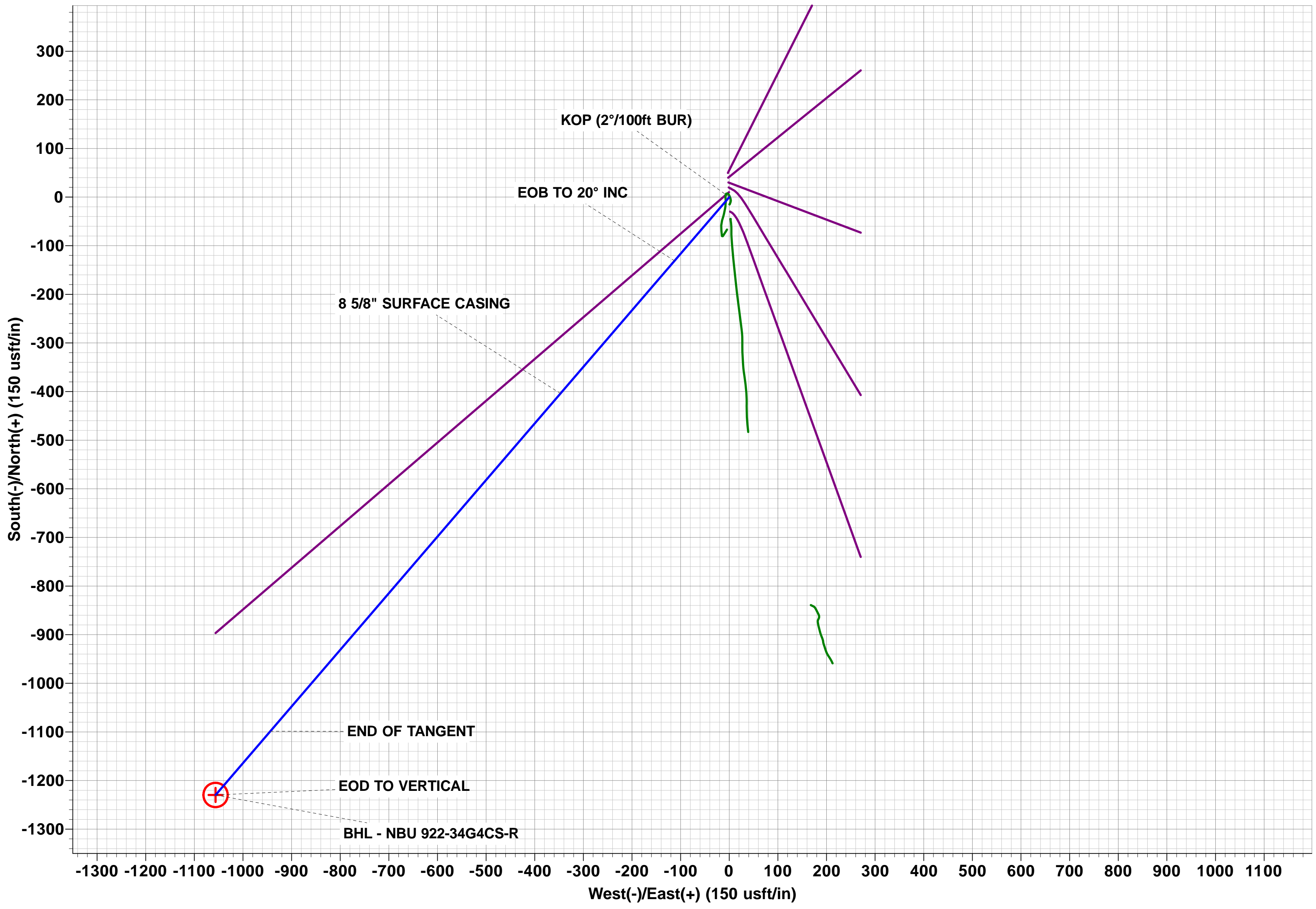
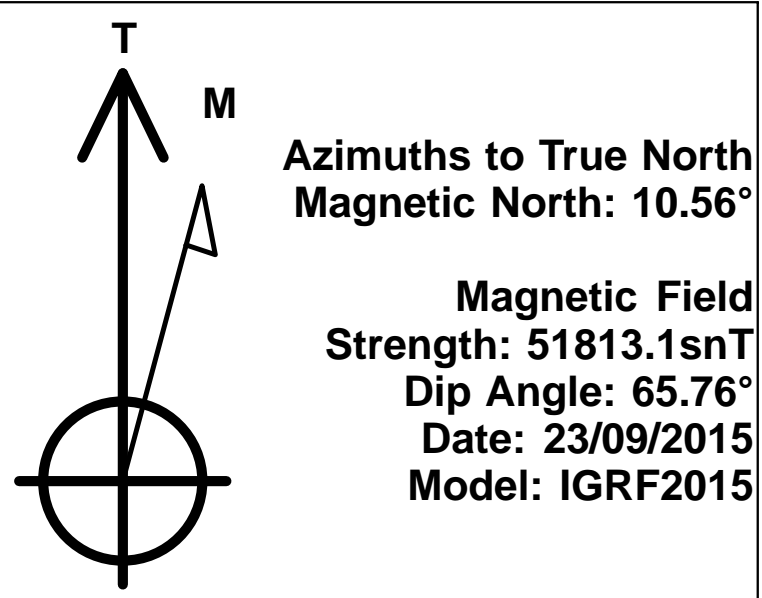
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34G4CS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1047.0	1057.7	GREEN RIVER
1348.0	1375.8	BIRDS NEST
1768.0	1822.7	MAHOGANY MARKER
4234.0	4447.0	WASATCH
6580.0	6845.3	MESAVERDE
8834.0	9099.3	SEGO



WELL DETAILS: NBU 922-34G4CS-R									Azimuths to True North Magnetic North: 10.56°  Magnetic Field Strength: 51813.1nT Dip Angle: 65.76° Date: 23/09/2015 Model: IGRF2015	
Ground Level: 4854.0										
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude					
0.0	0.0	14528555.15	2083294.74	39° 59' 45.984 N	109° 25' 7.489 W					
DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
BHL - NBU 922-34G4CS-R	8834.0	-1229.6	-1056.4	14527307.18	2082260.55	39° 59' 33.832 N	109° 25' 21.061 W			
ANNOTATIONS										
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
	250.0	250.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)	
	1229.9	1250.0	20.00	220.67	-131.1	-112.6	172.8	172.8	EOB TO 20° INC	
	2218.0	2301.6	20.00	220.67	-403.9	-347.0	532.5	532.5	8 5/8" SURFACE CASING	
	4734.1	4979.3	20.00	220.67	-1098.6	-943.8	1448.3	1448.3	END OF TANGENT	
	5714.0	5979.3	0.00	0.00	-1229.6	-1056.4	1621.1	1621.1	EOD TO VERTICAL	
	8834.0	9099.3	0.00	0.00	-1229.6	-1056.4	1621.1	1621.1	BHL - NBU 922-34G4CS-R	





## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-34G4CS-R
<b>Company:</b>	ANADARKO PETROLEUM CORP	<b>TVD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Project:</b>	UINTAH COUNTY, UTAH (NAD 27)	<b>MD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Site:</b>	SEC. 34 T9S R22E (NBU 922-34H PAD)	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-34G4CS-R	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	UINTAH COUNTY, UTAH (NAD 27)		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		Using geodetic scale factor

<b>Site</b>	SEC. 34 T9S R22E (NBU 922-34H PAD)		
<b>Site Position:</b>		<b>Northing:</b>	14,528,604.84 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,083,291.06 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39° 59' 46.476 N
		<b>Longitude:</b>	109° 25' 7.525 W
		<b>Grid Convergence:</b>	1.02 °

<b>Well</b>	NBU 922-34G4CS-R		
<b>Well Position</b>	<b>+N/-S</b>	-49.8 usft	<b>Northing:</b>
	<b>+E/-W</b>	2.8 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	23/09/2015	10.56	65.76	51,813

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	8,834.0	0.0	0.0	220.67

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,858.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	-4,608.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,250.0	20.00	220.67	1,229.9	-3,628.1	-131.1	-112.6	2.00	2.00	0.00	220.67	
4,979.3	20.00	220.67	4,734.1	-123.9	-1,098.6	-943.8	0.00	0.00	0.00	0.00	
5,979.3	0.00	0.00	5,714.0	856.0	-1,229.6	-1,056.4	2.00	-2.00	0.00	180.00	
9,099.3	0.00	0.00	8,834.0	3,976.0	-1,229.6	-1,056.4	0.00	0.00	0.00	0.00	BHL - NBU 922-34G



## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-34G4CS-R
<b>Company:</b>	ANADARKO PETROLEUM CORP	<b>TVD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Project:</b>	UINTAH COUNTY, UTAH (NAD 27)	<b>MD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Site:</b>	SEC. 34 T9S R22E (NBU 922-34H PAD)	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-34G4CS-R	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	4,858.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,758.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,658.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP (2°/100ft BUR)</b>										
250.0	0.00	0.00	250.0	4,608.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	1.00	220.67	300.0	4,558.00	-0.3	-0.3	0.4	2.00	2.00	0.00
400.0	3.00	220.67	399.9	4,458.07	-3.0	-2.6	3.9	2.00	2.00	0.00
500.0	5.00	220.67	499.7	4,358.32	-8.3	-7.1	10.9	2.00	2.00	0.00
600.0	7.00	220.67	599.1	4,258.87	-16.2	-13.9	21.4	2.00	2.00	0.00
700.0	9.00	220.67	698.2	4,159.85	-26.8	-23.0	35.3	2.00	2.00	0.00
800.0	11.00	220.67	796.6	4,061.37	-39.9	-34.3	52.6	2.00	2.00	0.00
900.0	13.00	220.67	894.4	3,963.56	-55.7	-47.8	73.4	2.00	2.00	0.00
1,000.0	15.00	220.67	991.5	3,866.54	-74.0	-63.6	97.6	2.00	2.00	0.00
<b>GREEN RIVER</b>										
1,057.7	16.15	220.67	1,047.0	3,811.00	-85.8	-73.7	113.1	2.00	2.00	0.00
1,100.0	17.00	220.67	1,087.6	3,770.42	-95.0	-81.6	125.2	2.00	2.00	0.00
1,200.0	19.00	220.67	1,182.7	3,675.32	-118.4	-101.7	156.1	2.00	2.00	0.00
<b>EOB TO 20° INC</b>										
1,250.0	20.00	220.67	1,229.9	3,628.15	-131.1	-112.6	172.8	2.00	2.00	0.00
1,300.0	20.00	220.67	1,276.8	3,581.20	-144.0	-123.7	189.9	0.00	0.00	0.00
<b>BIRDS NEST</b>										
1,375.8	20.00	220.67	1,348.0	3,510.00	-163.7	-140.6	215.8	0.00	0.00	0.00
1,400.0	20.00	220.67	1,370.8	3,487.23	-170.0	-146.0	224.1	0.00	0.00	0.00
1,500.0	20.00	220.67	1,464.7	3,393.26	-195.9	-168.3	258.3	0.00	0.00	0.00
1,600.0	20.00	220.67	1,558.7	3,299.29	-221.9	-190.6	292.5	0.00	0.00	0.00
1,700.0	20.00	220.67	1,652.7	3,205.32	-247.8	-212.9	326.7	0.00	0.00	0.00
1,800.0	20.00	220.67	1,746.6	3,111.36	-273.7	-235.2	360.9	0.00	0.00	0.00
<b>MAHOGANY MARKER</b>										
1,822.7	20.00	220.67	1,768.0	3,090.00	-279.6	-240.2	368.7	0.00	0.00	0.00
1,900.0	20.00	220.67	1,840.6	3,017.39	-299.7	-257.5	395.1	0.00	0.00	0.00
2,000.0	20.00	220.67	1,934.6	2,923.42	-325.6	-279.7	429.3	0.00	0.00	0.00
2,100.0	20.00	220.67	2,028.6	2,829.45	-351.6	-302.0	463.5	0.00	0.00	0.00
2,200.0	20.00	220.67	2,122.5	2,735.48	-377.5	-324.3	497.7	0.00	0.00	0.00
2,300.0	20.00	220.67	2,216.5	2,641.51	-403.5	-346.6	531.9	0.00	0.00	0.00
<b>8 5/8" SURFACE CASING</b>										
2,301.6	20.00	220.67	2,218.0	2,640.00	-403.9	-347.0	532.5	0.00	0.00	0.00
2,400.0	20.00	220.67	2,310.5	2,547.54	-429.4	-368.9	566.1	0.00	0.00	0.00
2,500.0	20.00	220.67	2,404.4	2,453.57	-455.4	-391.2	600.3	0.00	0.00	0.00
2,600.0	20.00	220.67	2,498.4	2,359.61	-481.3	-413.5	634.5	0.00	0.00	0.00
2,700.0	20.00	220.67	2,592.4	2,265.64	-507.2	-435.8	668.7	0.00	0.00	0.00
2,800.0	20.00	220.67	2,686.3	2,171.67	-533.2	-458.0	702.9	0.00	0.00	0.00
2,900.0	20.00	220.67	2,780.3	2,077.70	-559.1	-480.3	737.1	0.00	0.00	0.00
3,000.0	20.00	220.67	2,874.3	1,983.73	-585.1	-502.6	771.3	0.00	0.00	0.00
3,100.0	20.00	220.67	2,968.2	1,889.76	-611.0	-524.9	805.5	0.00	0.00	0.00
3,200.0	20.00	220.67	3,062.2	1,795.79	-637.0	-547.2	839.7	0.00	0.00	0.00
3,300.0	20.00	220.67	3,156.2	1,701.82	-662.9	-569.5	873.9	0.00	0.00	0.00
3,400.0	20.00	220.67	3,250.1	1,607.86	-688.9	-591.8	908.1	0.00	0.00	0.00
3,500.0	20.00	220.67	3,344.1	1,513.89	-714.8	-614.1	942.3	0.00	0.00	0.00
3,600.0	20.00	220.67	3,438.1	1,419.92	-740.7	-636.4	976.5	0.00	0.00	0.00
3,700.0	20.00	220.67	3,532.1	1,325.95	-766.7	-658.6	1,010.7	0.00	0.00	0.00
3,800.0	20.00	220.67	3,626.0	1,231.98	-792.6	-680.9	1,045.0	0.00	0.00	0.00
3,900.0	20.00	220.67	3,720.0	1,138.01	-818.6	-703.2	1,079.2	0.00	0.00	0.00
4,000.0	20.00	220.67	3,814.0	1,044.04	-844.5	-725.5	1,113.4	0.00	0.00	0.00



## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-34G4CS-R
<b>Company:</b>	ANADARKO PETROLEUM CORP	<b>TVD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Project:</b>	UINTAH COUNTY, UTAH (NAD 27)	<b>MD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Site:</b>	SEC. 34 T9S R22E (NBU 922-34H PAD)	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-34G4CS-R	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.0	20.00	220.67	3,907.9	950.07	-870.5	-747.8	1,147.6	0.00	0.00	0.00
4,200.0	20.00	220.67	4,001.9	856.11	-896.4	-770.1	1,181.8	0.00	0.00	0.00
4,300.0	20.00	220.67	4,095.9	762.14	-922.3	-792.4	1,216.0	0.00	0.00	0.00
4,400.0	20.00	220.67	4,189.8	668.17	-948.3	-814.7	1,250.2	0.00	0.00	0.00
<b>WASATCH</b>										
<b>4,447.0</b>	<b>20.00</b>	<b>220.67</b>	<b>4,234.0</b>	<b>624.00</b>	<b>-960.5</b>	<b>-825.1</b>	<b>1,266.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,500.0	20.00	220.67	4,283.8	574.20	-974.2	-836.9	1,284.4	0.00	0.00	0.00
4,600.0	20.00	220.67	4,377.8	480.23	-1,000.2	-859.2	1,318.6	0.00	0.00	0.00
4,700.0	20.00	220.67	4,471.7	386.26	-1,026.1	-881.5	1,352.8	0.00	0.00	0.00
4,800.0	20.00	220.67	4,565.7	292.29	-1,052.1	-903.8	1,387.0	0.00	0.00	0.00
4,900.0	20.00	220.67	4,659.7	198.32	-1,078.0	-926.1	1,421.2	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,979.3</b>	<b>20.00</b>	<b>220.67</b>	<b>4,734.1</b>	<b>123.85</b>	<b>-1,098.6</b>	<b>-943.8</b>	<b>1,448.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,000.0	19.59	220.67	4,753.7	104.33	-1,103.9	-948.3	1,455.3	2.00	-2.00	0.00
5,100.0	17.59	220.67	4,848.5	9.55	-1,128.1	-969.1	1,487.2	2.00	-2.00	0.00
5,200.0	15.59	220.67	4,944.3	-86.28	-1,149.7	-987.7	1,515.7	2.00	-2.00	0.00
5,300.0	13.59	220.67	5,041.1	-183.06	-1,168.8	-1,004.1	1,540.9	2.00	-2.00	0.00
5,400.0	11.59	220.67	5,138.6	-280.65	-1,185.4	-1,018.3	1,562.7	2.00	-2.00	0.00
5,500.0	9.59	220.67	5,236.9	-378.94	-1,199.3	-1,030.3	1,581.1	2.00	-2.00	0.00
5,600.0	7.59	220.67	5,335.8	-477.82	-1,210.6	-1,040.0	1,596.0	2.00	-2.00	0.00
5,700.0	5.59	220.67	5,435.2	-577.15	-1,219.3	-1,047.5	1,607.5	2.00	-2.00	0.00
5,800.0	3.59	220.67	5,534.8	-676.83	-1,225.4	-1,052.7	1,615.5	2.00	-2.00	0.00
5,900.0	1.59	220.67	5,634.7	-776.72	-1,228.8	-1,055.6	1,620.0	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,979.3</b>	<b>0.00</b>	<b>0.00</b>	<b>5,714.0</b>	<b>-856.00</b>	<b>-1,229.6</b>	<b>-1,056.4</b>	<b>1,621.1</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
6,000.0	0.00	0.00	5,734.7	-876.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,100.0	0.00	0.00	5,834.7	-976.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,200.0	0.00	0.00	5,934.7	-1,076.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,300.0	0.00	0.00	6,034.7	-1,176.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,134.7	-1,276.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,500.0	0.00	0.00	6,234.7	-1,376.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,334.7	-1,476.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,700.0	0.00	0.00	6,434.7	-1,576.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,534.7	-1,676.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
<b>MESAVERDE</b>										
<b>6,845.3</b>	<b>0.00</b>	<b>0.00</b>	<b>6,580.0</b>	<b>-1,722.00</b>	<b>-1,229.6</b>	<b>-1,056.4</b>	<b>1,621.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,900.0	0.00	0.00	6,634.7	-1,776.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,734.7	-1,876.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,100.0	0.00	0.00	6,834.7	-1,976.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,200.0	0.00	0.00	6,934.7	-2,076.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,034.7	-2,176.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,134.7	-2,276.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,500.0	0.00	0.00	7,234.7	-2,376.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,334.7	-2,476.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,434.7	-2,576.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,534.7	-2,676.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,634.7	-2,776.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,734.7	-2,876.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,100.0	0.00	0.00	7,834.7	-2,976.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,200.0	0.00	0.00	7,934.7	-3,076.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,034.7	-3,176.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,134.7	-3,276.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,234.7	-3,376.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00



## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-34G4CS-R
<b>Company:</b>	ANADARKO PETROLEUM CORP	<b>TVD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Project:</b>	UINTAH COUNTY, UTAH (NAD 27)	<b>MD Reference:</b>	KB-EST @ 4858.0usft (PROPETRO 12)
<b>Site:</b>	SEC. 34 T9S R22E (NBU 922-34H PAD)	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-34G4CS-R	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	0.00	0.00	8,334.7	-3,476.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,434.7	-3,576.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,534.7	-3,676.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,634.7	-3,776.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,734.7	-3,876.71	-1,229.6	-1,056.4	1,621.1	0.00	0.00	0.00
<b>BHL - NBU 922-34G4CS-R - SEGO</b>										
<b>9,099.3</b>	<b>0.00</b>	<b>0.00</b>	<b>8,834.0</b>	<b>-3,976.00</b>	<b>-1,229.6</b>	<b>-1,056.4</b>	<b>1,621.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,057.7	1,047.0	GREEN RIVER		0.00	
1,375.8	1,348.0	BIRDS NEST		0.00	
1,822.7	1,768.0	MAHOGANY MARKER		0.00	
4,447.0	4,234.0	WASATCH		0.00	
6,845.3	6,580.0	MESAVERDE		0.00	
9,099.3	8,834.0	SEGO		0.00	

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	0.0	0.0	KOP (2°/100ft BUR)
1,250.0	1,229.9	-131.1	-112.6	EOB TO 20° INC
2,301.6	2,218.0	-403.9	-347.0	8 5/8" SURFACE CASING
4,979.3	4,734.1	-1,098.6	-943.8	END OF TANGENT
5,979.3	5,714.0	-1,229.6	-1,056.4	EOD TO VERTICAL
9,099.3	8,834.0	-1,229.6	-1,056.4	BHL - NBU 922-34G4CS-R



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
 NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
 NBU 922-34H4BS / NBU 922-34H4CS

## Kerr-McGee Oil & Gas Onshore. L.P.

### NBU 922-34H PAD

<u>API #</u>	<u>NBU 922-34A4BS-R</u>	
	Surface: 1296 FNL / 767 FEL	NENE
	BHL: 751 FNL / 494 FEL	NENE
<u>API #</u>	<u>NBU 922-34A4CS-R</u>	
	Surface: 1306 FNL / 767 FEL	NENE
	BHL: 1084 FNL / 494 FEL	NENE
<u>API #</u>	<u>NBU 922-34G4BS-R</u>	
	Surface: 1335 FNL / 765 FEL	SENE
	BHL: 2245 FNL / 1821 FEL	SWNE
<u>API #</u>	<u>NBU 922-34G4CS-R</u>	
	Surface: 1345 FNL / 764 FEL	SENE
	BHL: 2578 FNL / 1821 FEL	SWNE
<u>API #</u>	<u>NBU 922-34H1BS-R</u>	
	Surface: 1316 FNL / 766 FEL	SENE
	BHL: 1418 FNL / 494 FEL	SENE
<u>API #</u>	<u>NBU 922-34H1CS-R</u>	
	Surface: 1326 FNL / 765 FEL	SENE
	BHL: 1752 FNL / 494 FEL	SENE
<u>API #</u>	<u>NBU 922-34H4BS-R</u>	
	Surface: 1375 FNL / 763 FEL	SENE
	BHL: 2085 FNL / 494 FEL	SENE
<u>API #4304753743</u>	<u>NBU 922-34H4CS</u>	
	Surface: 1390 FNL / 762 FEL	SENE
	BHL: 2419 FNL / 494 FEL	SENE

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
2 of 7

An on-site meeting was held on August 16-17, 2012. Present were:

- Dave Gordon, Tyler Cox, Aaron Roe and Brian Barnett - BLM;
- Jessi Brunson - USFWS;
- Bill Knapp - ICF Consulting;
- Jacob Dunham - 609 Consulting;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Gina Becker, Charles Chase, Lindsey Frazier, Doyle Holmes, Randy Townley and Casey McKee- Kerr-McGee

**A. Existing Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

**B. New or Reconstructed Access Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**The following segments are "on-lease"**

±110' (0.02 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077, from the edge of pad to the T-intersection in SE/4 NE/4. Please refer to Topo B.

**C. Location of Existing Wells:**

Please refer to Topo C for existing wells.

**D. Location of Existing and/or Proposed Facilities:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will expand the existing pad for the CIGE 212, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on of pad November 21, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

**GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The total gas gathering pipeline distance from the meter to the tie in point is ±9,500' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

±200' (0.04 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
 NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
 NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
 3 of 7

- ±895' (0.2 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077, BLM surface, New 10" buried gas gathering pipeline from the edge of the pad to tie-in to the proposed buried 12" gas gathering pipeline at the NBU 922-34H4 Pad intersection . Please refer to Exhibit A, Line 9.
- ±3,305' (0.6 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077 and UTU-010954-A, BLM surface, New 12" buried gas gathering pipeline from the NBU 922-34H4 Pad pipeline intersection to tie-in to the proposed buried 16" gas gathering pipeline at the NBU 922-35N Pad intersection located at SE/4 NW/4, Section 35 of T9S-R22E. There will be 185' of cross country gas gathering pipeline. This pipeline will be used concurrently with the NBU 922-34H4 Pad. Please refer to Exhibit A, Lines 7 and 6.

**The following segments require a ROW. Anadarko Uintah Midstream (AUM) will apply for an SF-299/POD under separate cover. AUM will also apply for the appropriate State easements. Listed below is the gas gathering pipeline distances:**

- ±4,570' (0.9 miles) – Section 35 T9S R22E – On-lease UTU 010954-A, BLM surface, New 16" buried gas gathering pipeline from the NBU 922-35N Pad intersection to the eastern lease boundary. There are two segments of pipeline that are cross county, 205' (Exhibit A, Line 5) and 540' (Exhibit A, Line 3). Please refer to Exhibit A, Lines 5, 4, 3 and 2.
- ±530' (0.1 miles) – Section 36 T9S R22E – On-lease ST UT ML-22650, SITLA surface, New 16" buried gas gathering pipeline from the western lease boundary to the tie-in to the existing buried 16" gas gathering pipeline at the NBU 922-36E Pad. Please refer to Exhibit A, Line 1.

#### **LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is ±9,500' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- ±200' (0.04 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±895' (0.2 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-34H4 Pad intersection . Please refer to Exhibit B, Line 9.
- ±3,305' (0.6 miles) – Section 34 T9S R22E (SE/4 NE/4) – On-lease UTU-0149077 and UTU-010954-A, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-34H4 Pad pipeline intersection to tie-in to the proposed buried 6" liquid gathering pipeline at the NBU 922-35N Pad intersection located at SE/4 NW/4, Section 35 of T9S-R22E. There will be 185' of cross country liquid gathering pipeline. This pipeline will be used concurrently with the NBU 922-34H4 Pad. Please refer to Exhibit B, Lines 7 and 6.



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
4 of 7

±4,570' (0.9 miles) – Section 35 T9S R22E – On-lease UTU 010954-A, BLM surface, New 6" buried liquid gathering pipeline from the NBU 922-35N Pad intersection to the eastern lease boundary. There are two segments of pipeline that are cross county, 205' (Exhibit B, Line 5) and 540' (Exhibit B, Line 3). This pipeline will be used concurrently with the NBU 922-34H4, NBU 922-35N, NBU 922-35O, NBU 922-35I, NBU 922-35F, NBU 922-35G and NBU 922-35H. Please refer to Exhibit B, Lines 5, 4, 3 and 2.

**Anadarko Uintah Midstream (AUM) will apply for the appropriate State easements under separate cover. Listed below is the liquid gathering pipeline distances:**

±530' (0.1 miles) – Section 36 T9S R22E – On-lease ST UT ML-22650, SITLA surface, New 6" buried liquid gathering pipeline from the western lease boundary to the tie-in to the existing buried 6" liquid gathering pipeline at the NBU 922-36E Pad. Please refer to Exhibit B, Line 1.

**Pipeline Gathering Construction**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**The Anadarko Completions Transportation System (ACTS) information:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

**E. Location and Types of Water Supply:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Water will be hauled to location over the roads marked on Maps A and B.

**F. Construction Materials:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**G. Methods for Handling Waste:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Materials Management**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
5 of 7

**I. Well Site Layout:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**J. Plans for Surface Reclamation:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Interim Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Measures Common to Interim and Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Weed Control**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Monitoring**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**K. Surface/Mineral Ownership:**

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**L. Other Information:**

**Cultural and Paleontological Resources**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
6 of 7

**Resource Reports:**

A Class I literature survey was completed on September 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC-12-264.

A paleontological reconnaissance survey was completed on September 20, 2012 by SWCA Environmental Consultants. For additional details please refer to report SWCA-UT12-14314-178.

Biological field survey was completed on August 25, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-845.

**Proposed Action Annual Emissions Tables:**

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

RECEIVED: October 06, 2015



NBU 922-34A4BS / NBU 922-34A4CS / NBU 922-34G4BS  
NBU 922-34G4CS / NBU 922-34H1BS / NBU 922-34H1CS /  
NBU 922-34H4BS / NBU 922-34H4CS

Surface Use Plan of Operations  
7 of 7

**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker  
Senior Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

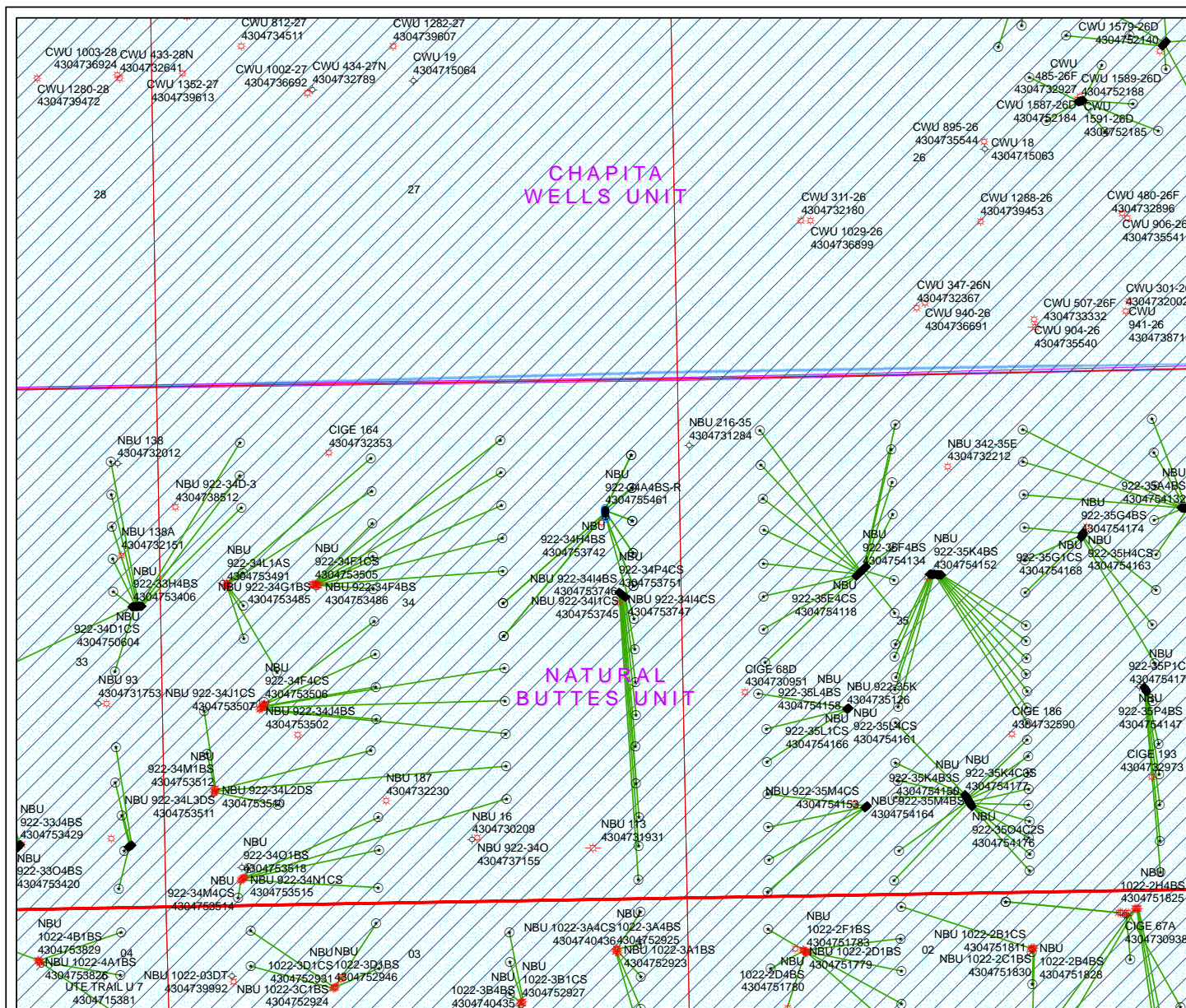
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Gina T.Becker

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January 23, 2013  
Date





API Number: 4304755458

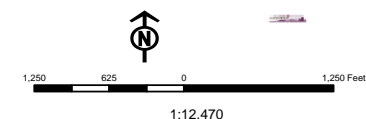
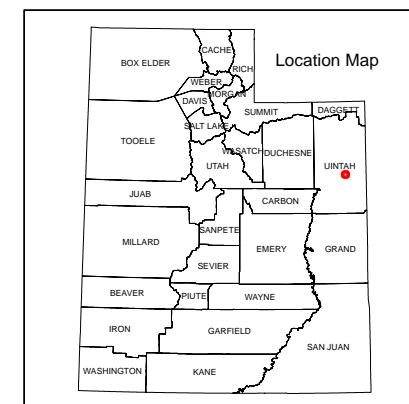
Well Name: NBU 922-34G4CS-R

Township: T09.0S Range: R22.0E Section: 34 Meridian: S

Operator: KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.

Map Prepared: 10/8/2015  
Map Produced by Diana Mason

Wells Query		Units	
Status		STATUS	
APD - Approved Permit		ACTIVE	
DRL - Spudded (Drilling Commenced)		EXPLORATORY	
GIW - Gas Injection		GAS STORAGE	
GS - Gas Storage		NF PP OIL	
LOC - New Location		NF SECONDARY	
OPS - Operation Suspended		PI OIL	
PA - Plugged Abandoned		PP GAS	
PGW - Producing Gas Well		PP GEOTHERML	
POW - Producing Oil Well		PP OIL	
SGW - Shut-in Gas Well		SECONDARY	
SOW - Shut-in Oil Well		TERMINATED	
TA - Temp. Abandoned			
TW - Test Well			
WOW - Water Disposal			
WW - Water Injection Well			
WSW - Water Supply Well			
Fields		STATUS	
		Unknown	
		ABANDONED	
		ACTIVE	
		COMBINED	
		INACTIVE	
		STORAGE	
		TERMINATED	





# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
440 West 200 South, Suite 500  
Salt Lake City, UT 84101

### IN REPLY REFER TO:

3160  
(UT-922)

October 19, 2015

### Memorandum

To: Assistant Field Office Manager Minerals,  
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2015 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2015 within the Natural Buttes Unit, Uintah County, Utah. The wells were previously permitted at a slightly different surface location (see our memo dated May 20, 2013).

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ WASATCH-MESA VERDE)

### PAD NBU

43-047-55455 NBU 922-34H4BS-R	Sec 34 T09S R22E 1375 FNL 0763 FEL
Previously 43-047-53742 BHL	Sec 34 T09S R22E 2085 FNL 0494 FEL
43-047-55456 NBU 922-34H1CS-R	Sec 34 T09S R22E 1326 FNL 0765 FEL
Previously 43-047-53741 BHL	Sec 34 T09S R22E 1752 FNL 0494 FEL
43-047-55457 NBU 922-34H1BS-R	Sec 34 T09S R22E 1316 FNL 0766 FEL
Previously 43-047-53740 BHL	Sec 34 T09S R22E 1418 FNL 0494 FEL
43-047-55458 NBU 922-34G4CS-R	Sec 34 T09S R22E 1345 FNL 0764 FEL
Previously 43-047-53739 BHL	Sec 34 T09S R22E 2578 FNL 1821 FEL
43-047-55459 NBU 922-34G4BS-R	Sec 34 T09S R22E 1335 FNL 0765 FEL
Previously 43-047-53738 BHL	Sec 34 T09S R22E 2245 FNL 1821 FEL
43-047-55460 NBU 922-34A4CS-R	Sec 34 T09S R22E 1306 FNL 0767 FEL
Previously 43-047-53737 BHL	Sec 34 T09S R22E 1084 FNL 0494 FEL
43-047-55461 NBU 922-34A4BS-R	Sec 34 T09S R22E 1296 FNL 0767 FEL
Previously 43-047-53736 BHL	Sec 34 T09S R22E 0751 FNL 0494 FEL

This office has no objection to permitting the wells at this time.

Michael Coulthard

Digitally signed by Michael Coulthard  
DN: cn=Michael Coulthard, o=Bureau of Land Management,  
ou=Division of Minerals, email=mcoultha@blm.gov, c=US  
Date: 2015.10.19 12:53:52 -0600

RECEIVED: October 19, 2015



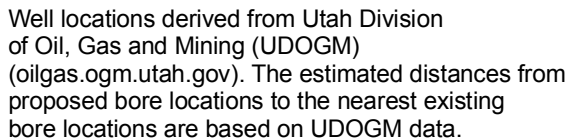
API Well Number: 43047554580000

bcc: File - Natural Buttes Unit  
Division of Oil Gas and Mining  
UT920 - Reading File  
Agr. Sec. Chron

MCoulthard:mc:10-19-15

RECEIVED: October 19, 2015





### Legend

- ## WELL PAD - NBU 922-34H

## TOPO C

**Kerr-McGee Oil &  
Gas Onshore L.P.**



CONSULTING, LLC

SCALE: 1" = 2,000ft

NAD83 USP Central

DRAWN: TI

DATE: 18 Sept 2012

REVISÉ: JCD

DATE: 24 Sept 2015

**SHEET NO:**

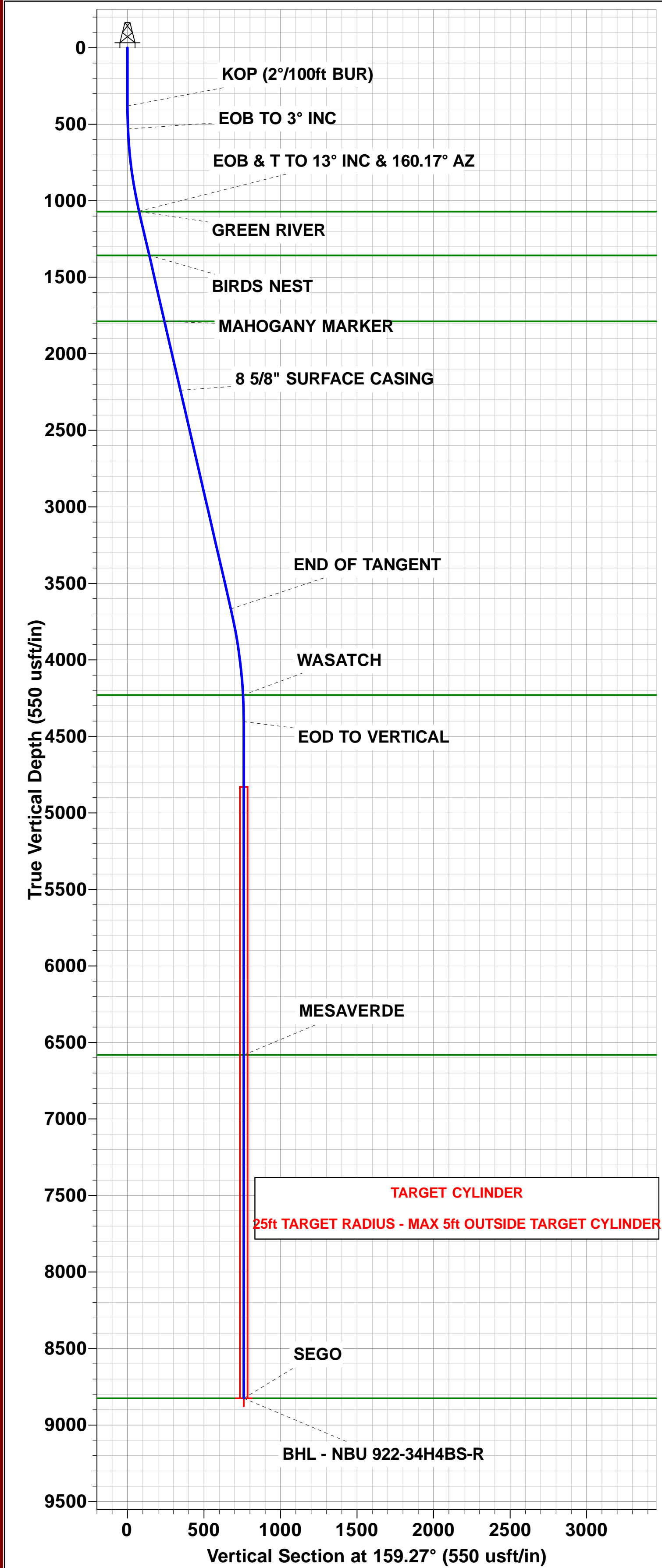
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16 OF 20

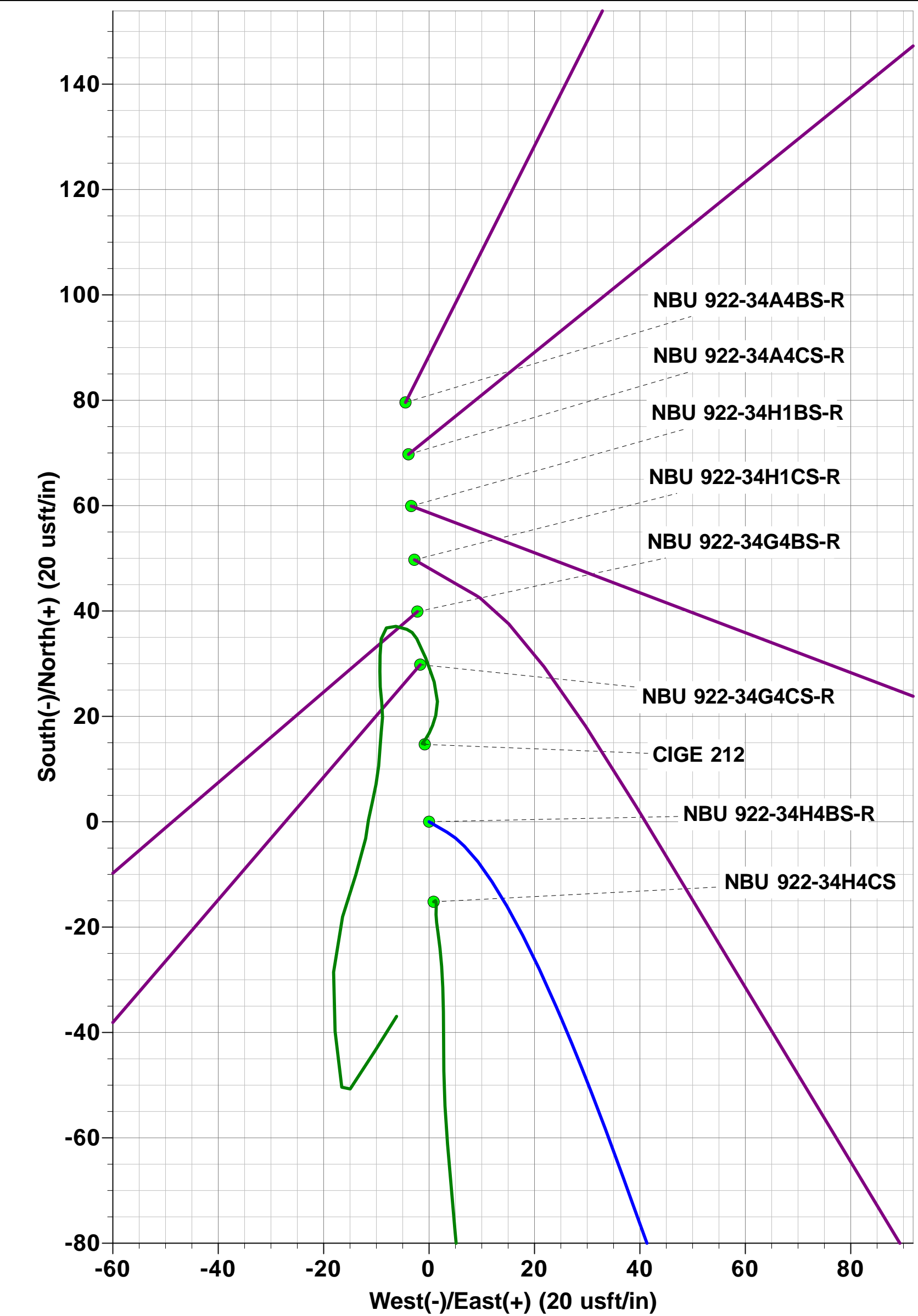




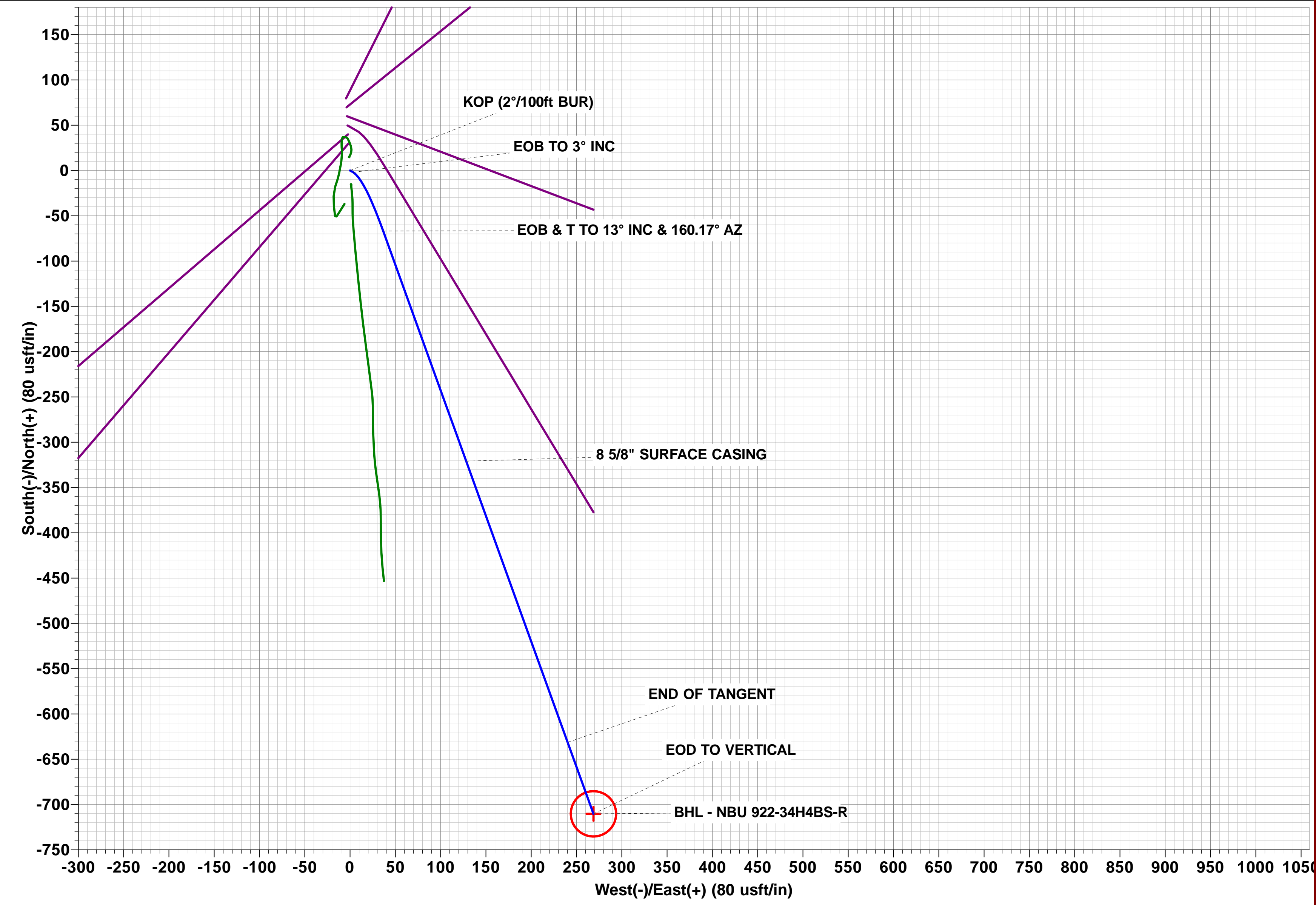
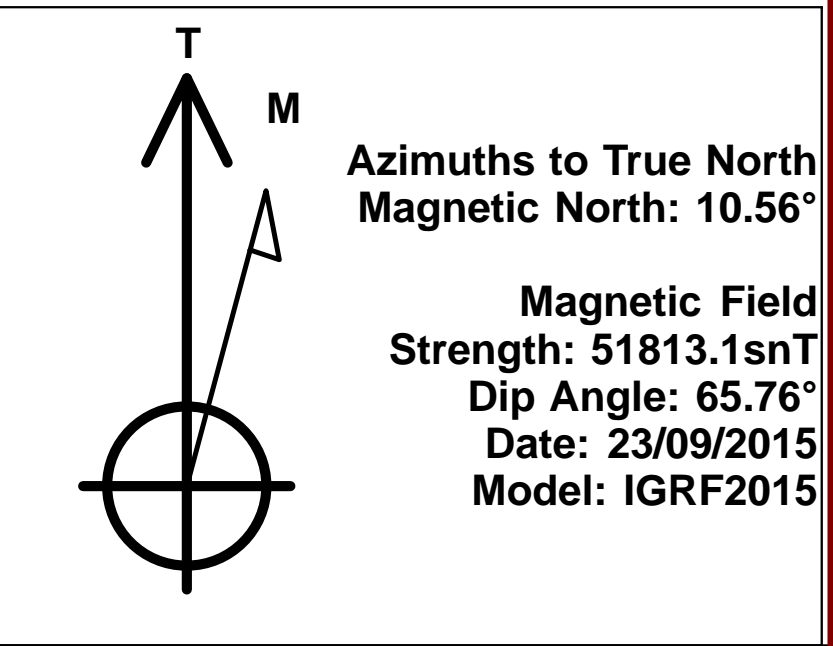
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34H4BS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1071.0	1076.9	GREEN RIVER
1357.0	1370.4	BIRDS NEST
1788.0	1812.7	MAHOGANY MARKER
4230.0	4310.4	WASATCH
6582.0	6662.5	MESAVERDE
8826.0	8906.5	SEGO



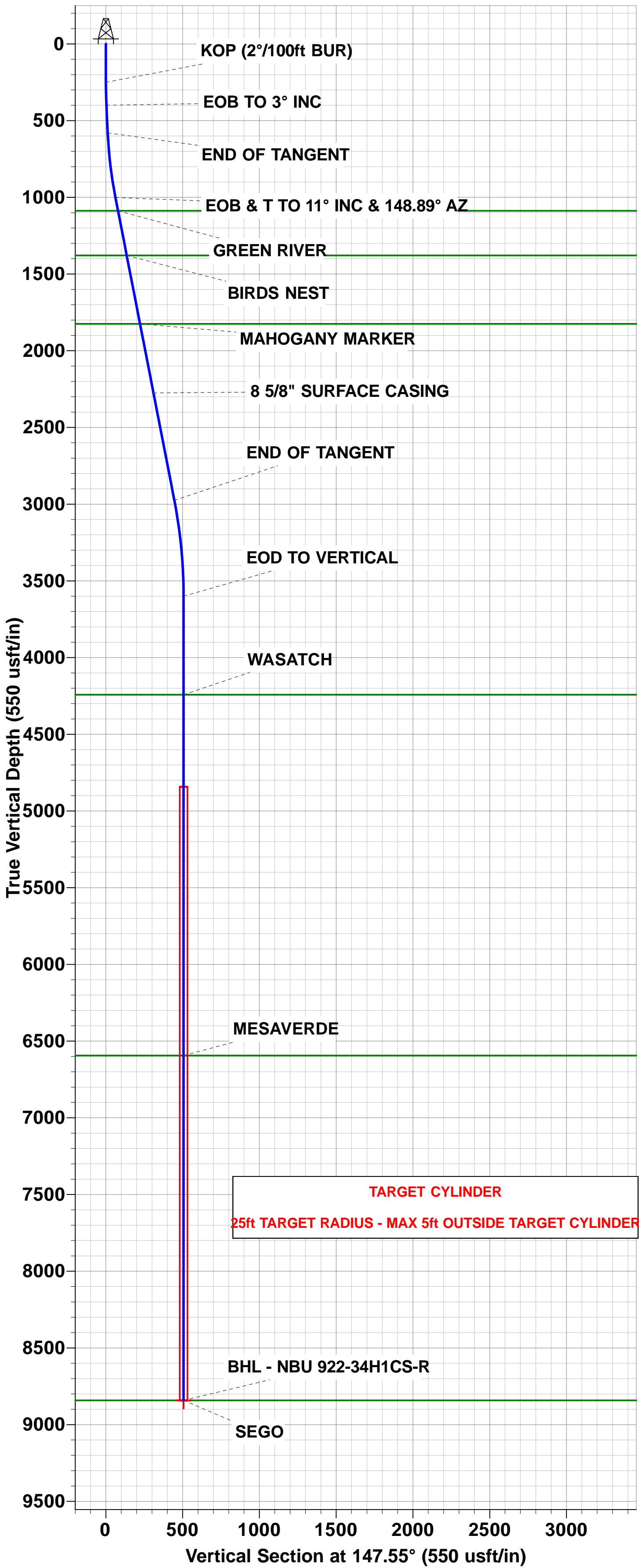
WELL DETAILS: NBU 922-34H4BS-R									
Ground Level: 4854.0									
+N-S 0.0	+E-W 0.0	Northing 14528525.35	Easting 2083296.93	Latitude 39° 59' 45.689 N	Longitude 109° 25' 7.468 W				
DESIGN TARGET DETAILS									
Name BHL - NBU 922-34H4BS-R	TVD 8826.0	+N-S -710.2	+E-W 268.7	Northing 14527820.12	Easting 2083578.17	Latitude 39° 59' 38.670 N	Longitude 109° 25' 4.015 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N-S	+E-W	VSec	Departure	Annotation
	380.0	380.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	529.9	530.0	3.00	120.00	-2.0	3.4	3.0	3.9	EOB TO 3° INC
	1068.1	1073.9	13.00	160.17	-66.8	36.6	75.4	77.6	EOB & T TO 13° INC
	2238.0	2274.6	13.00	160.17	-320.9	128.2	345.5	347.7	8 5/8" SURFACE CASING
	3667.2	3741.4	13.00	160.17	-631.3	240.2	675.4	677.7	END OF TANGENT
	4403.7	4484.3	0.00	0.00	-710.2	268.7	759.3	761.6	EOD TO VERTICAL
	8826.0	8906.5	0.00	0.00	-710.2	268.7	759.3	761.6	BHL - NBU 922-34H4BS-R



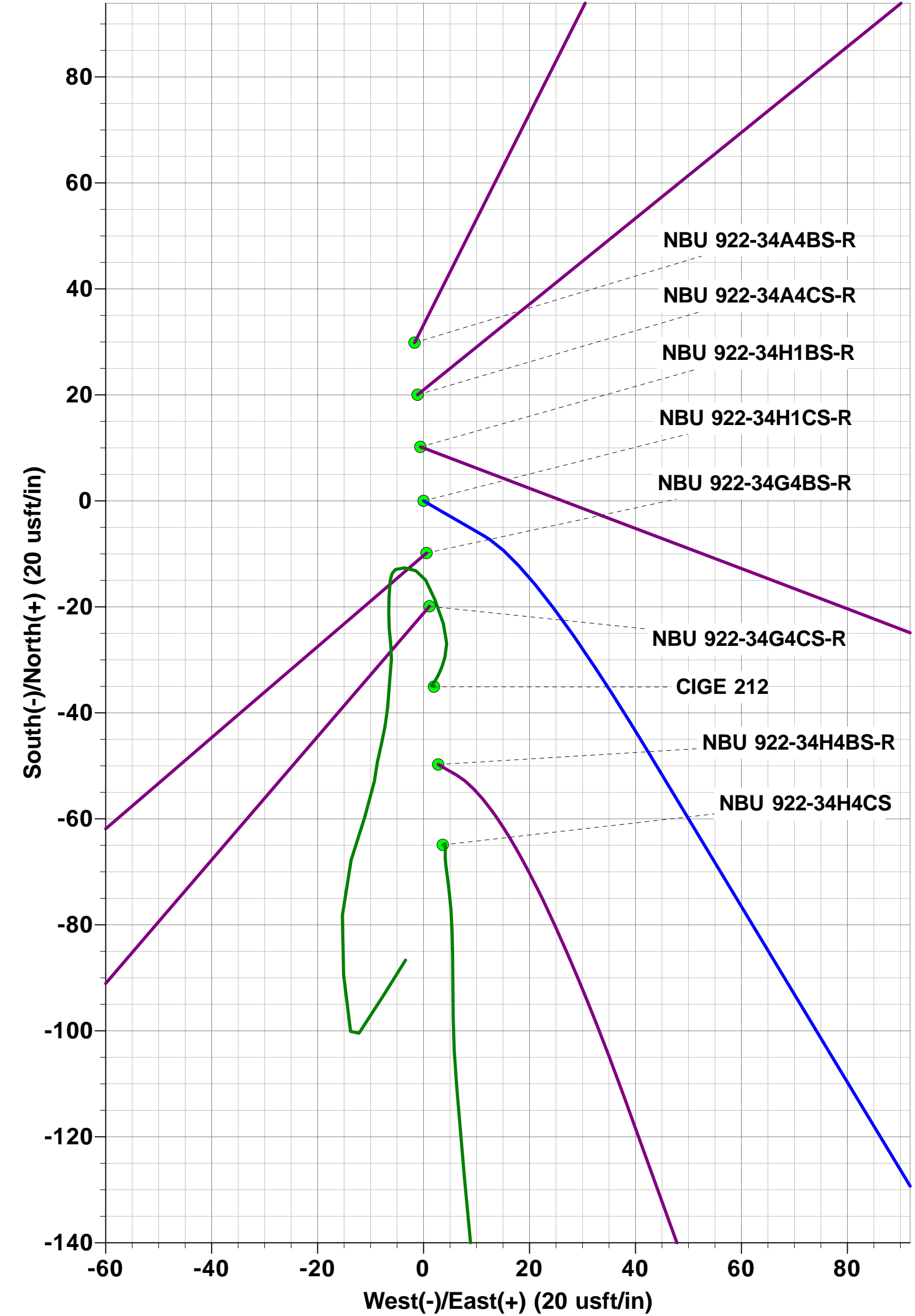


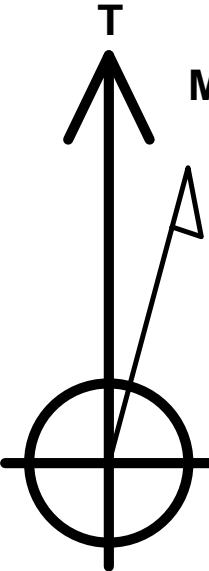


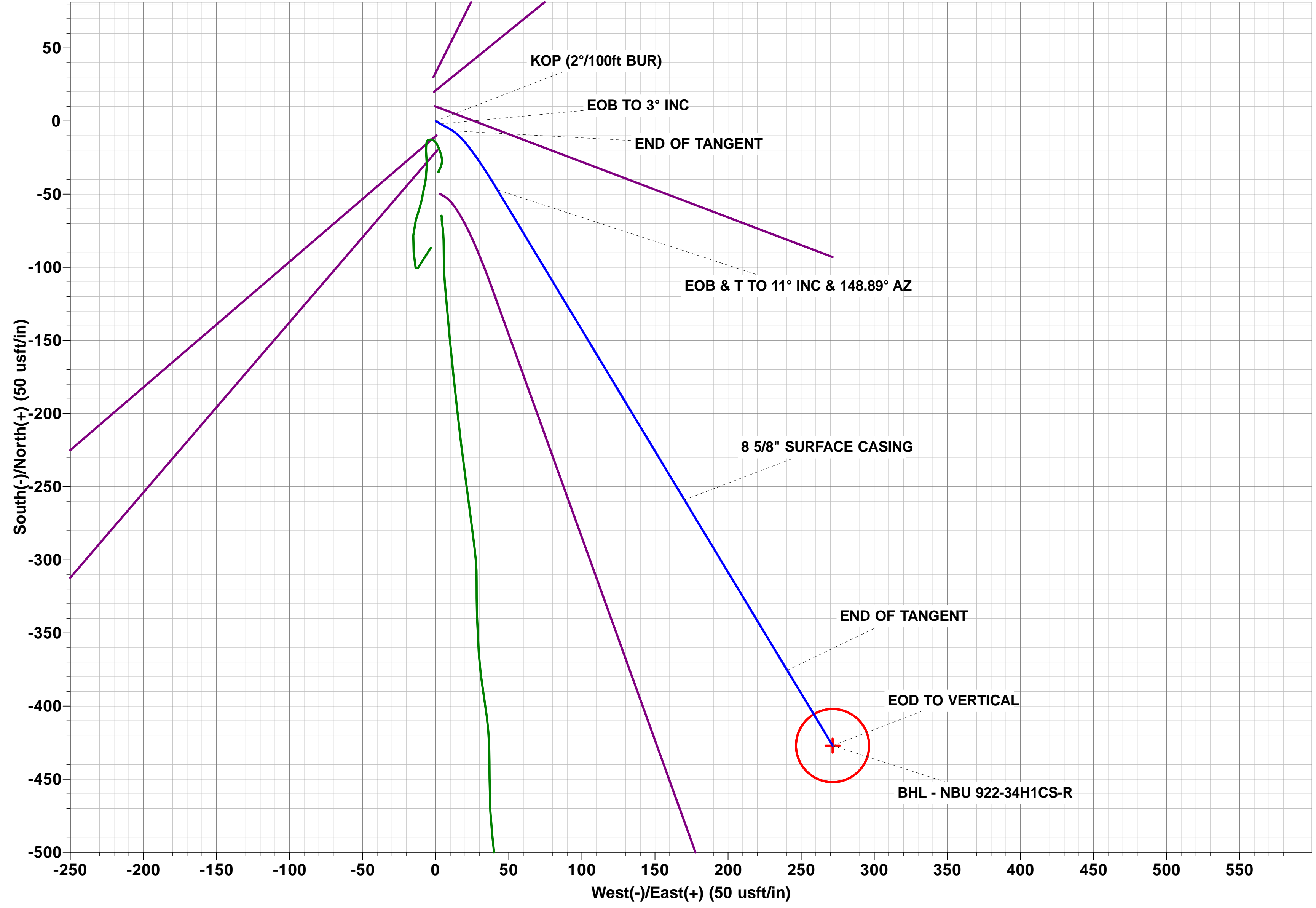
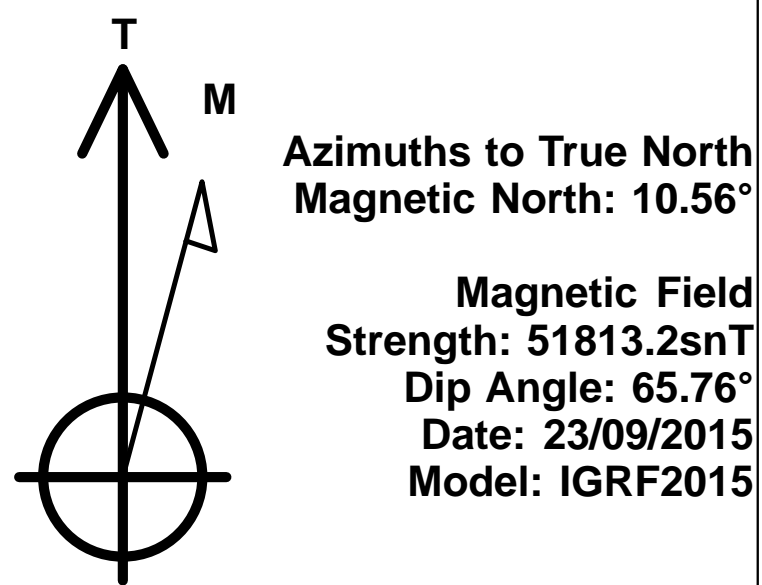
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34H1CS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1088.0	1093.4	GREEN RIVER
1379.0	1389.8	BIRDS NEST
1825.0	1844.2	MAHOGANY MARKER
4242.0	4286.5	WASATCH
6594.0	6638.5	MESAVERDE
8842.0	8886.5	SEGO



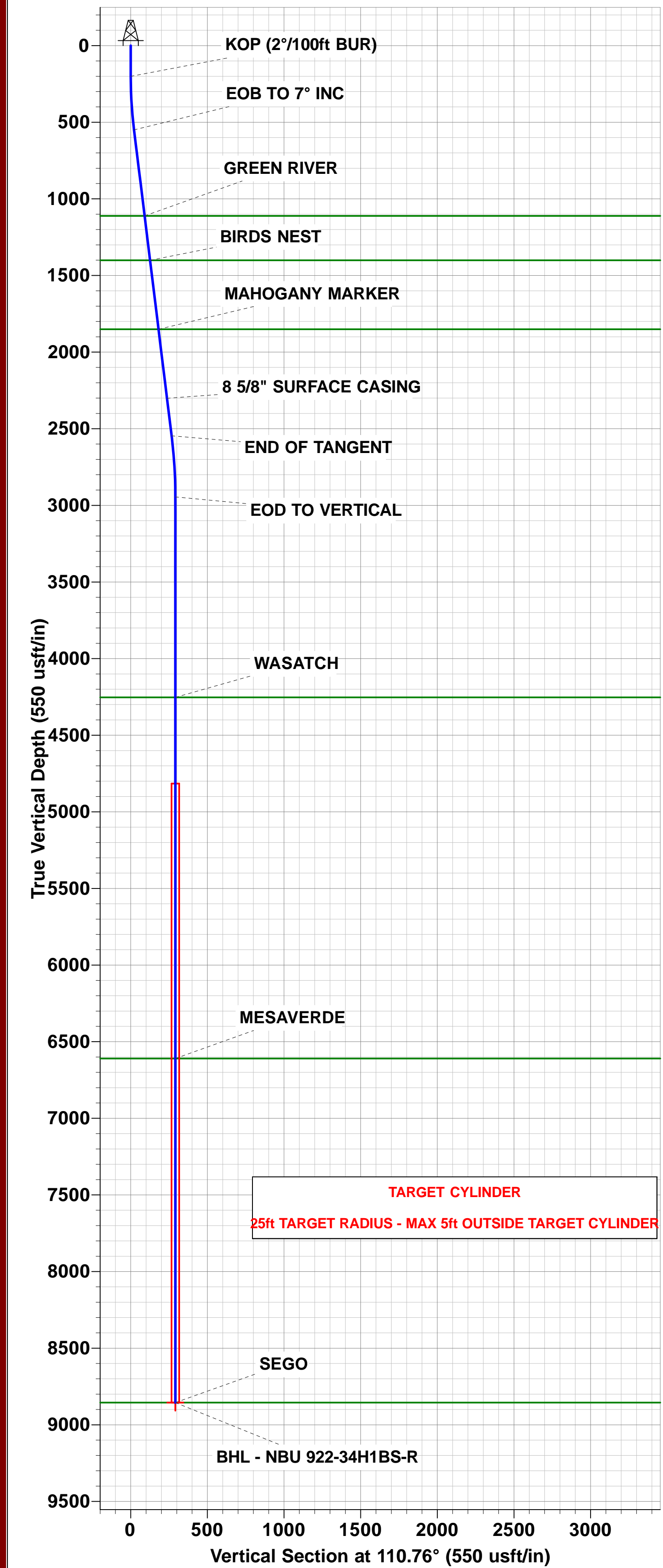
WELL DETAILS: NBU 922-34H1CS-R								<div><div><div>Azimuths to True North</div><div>Magnetic North: 10.56°</div><div>Magnetic Field</div><div>Strength: 51813.2snT</div><div>Dip Angle: 65.76°</div><div>Date: 23/09/2015</div><div>Model: IGRF2015</div></div></div>	
Ground Level: 4854.0									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.0	0.0	14528575.01	2083293.27	39° 59' 46.180 N	109° 25' 7.504 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
BHL - NBU 922-34H1CS-R	8842.0	-427.0	271.5	14528152.96	2083572.26	39° 59' 41.960 N	109° 25' 4.015 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
	250.0	250.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	399.9	400.0	3.00	120.00	-2.0	3.4	3.5	3.9	EOB TO 3° INC
	579.7	580.0	3.00	120.00	-6.7	11.6	11.8	13.3	END OF TANGENT
	1001.1	1004.8	11.00	148.89	-47.0	42.2	62.3	64.3	EOB & T TO 11° INC & 148.89° AZ
	2275.0	2302.6	11.00	148.89	-259.0	170.1	309.9	312.0	8 5/8" SURFACE CASING
	2975.1	3015.8	11.00	148.89	-375.5	240.5	445.9	448.1	END OF TANGENT
	3599.8	3644.4	0.00	0.00	-427.0	271.5	506.0	508.2	EOD TO VERTICAL
	8842.0	8886.5	0.00	0.00	-427.0	271.5	506.0	508.2	BHL - NBU 922-34H1CS-R



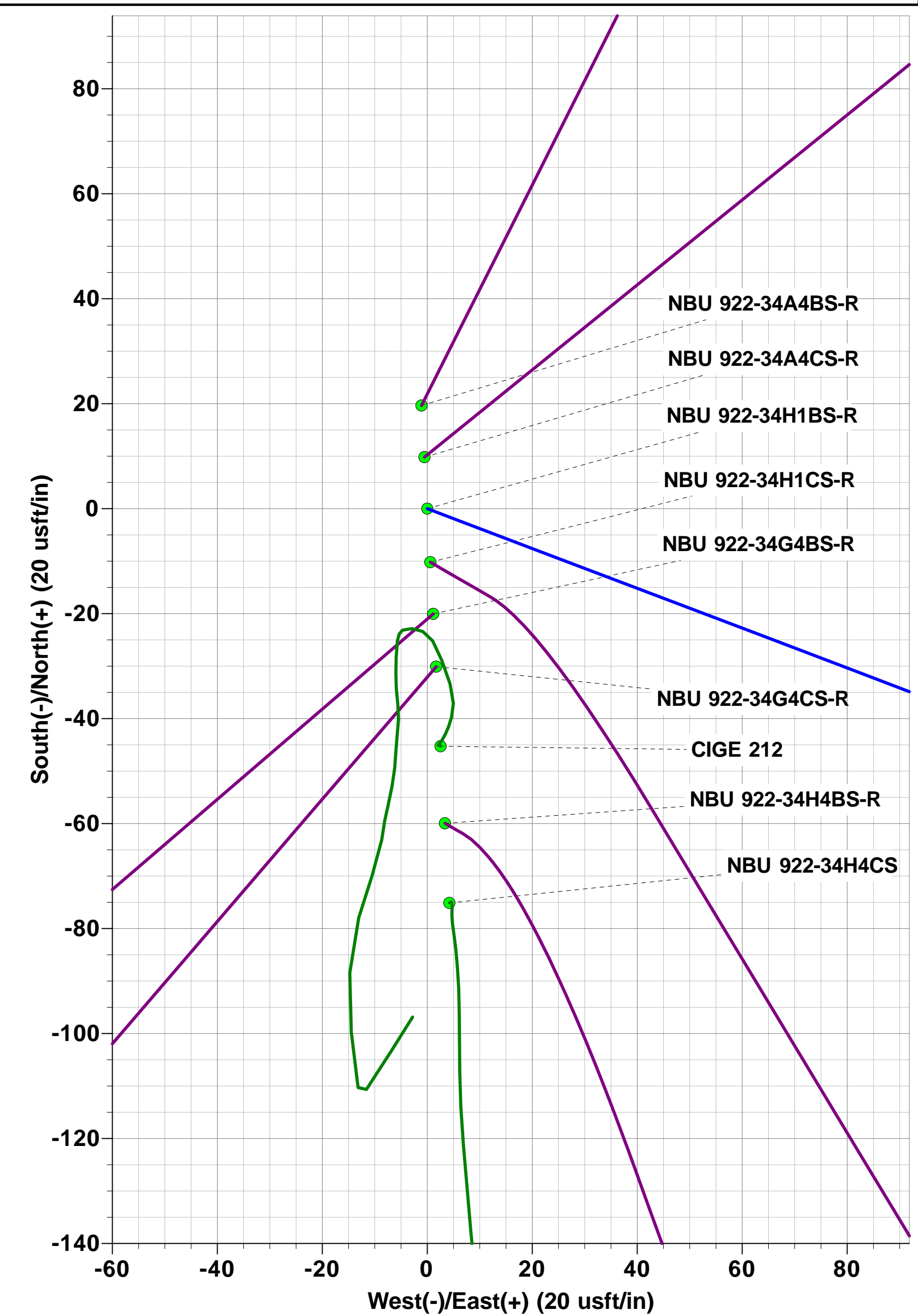


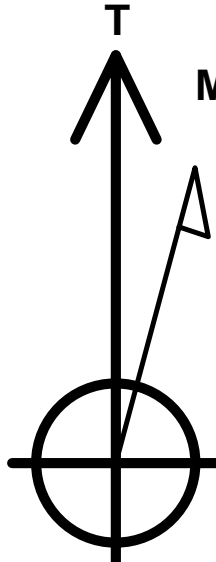


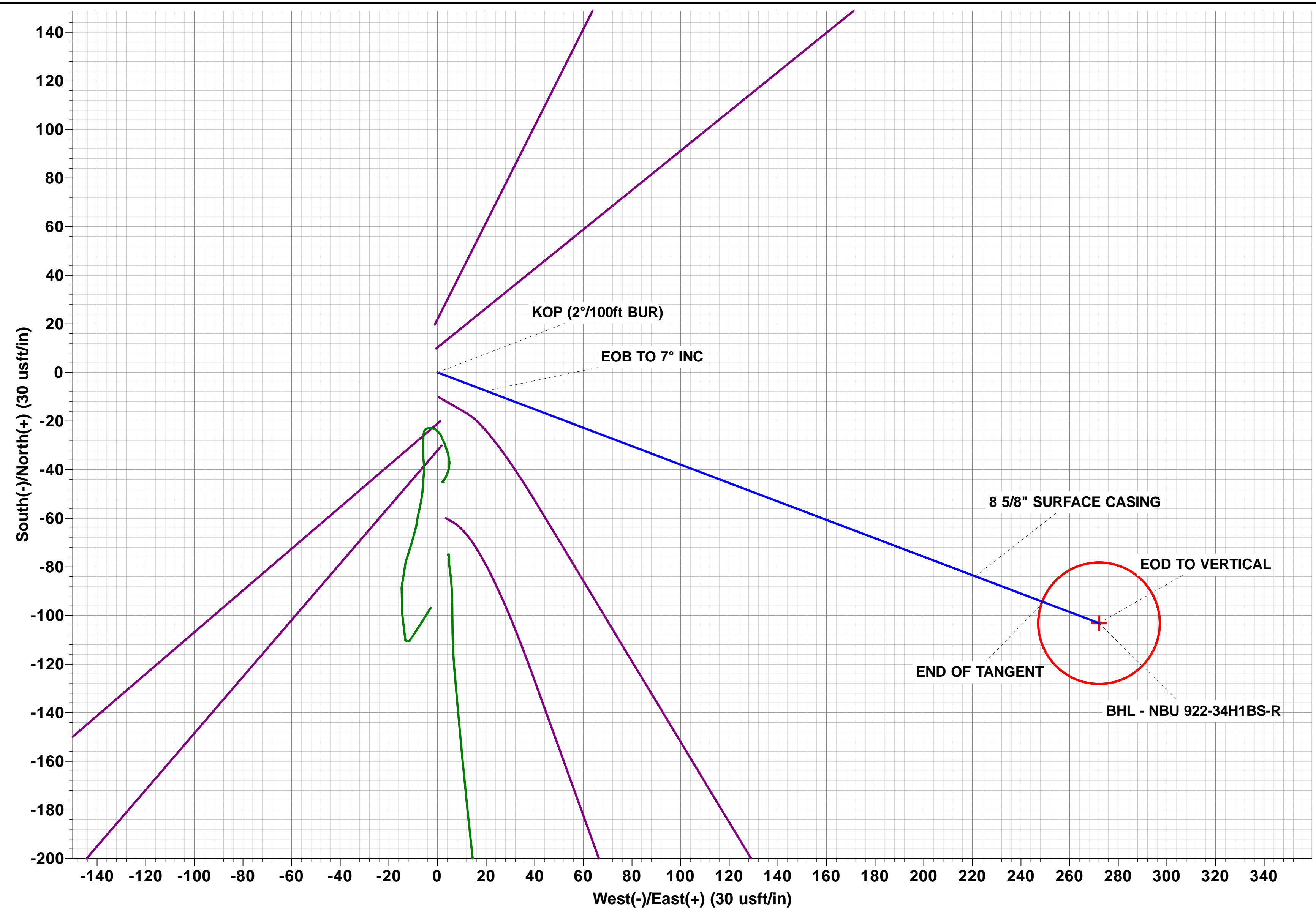
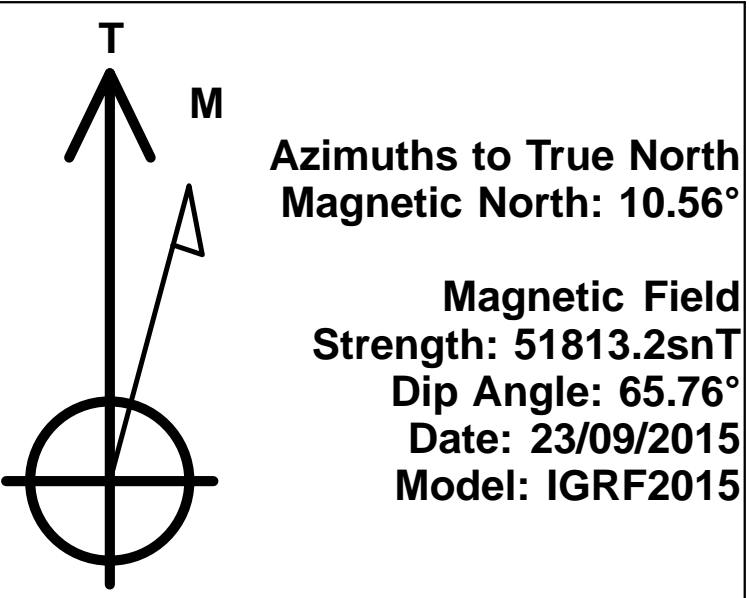
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34H1BS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1111.0	1116.1	GREEN RIVER
1401.0	1408.3	BIRDS NEST
1851.0	1861.7	MAHOGANY MARKER
4253.0	4269.9	WASATCH
6610.0	6626.9	MESAVERDE
8855.0	8871.9	SEGO



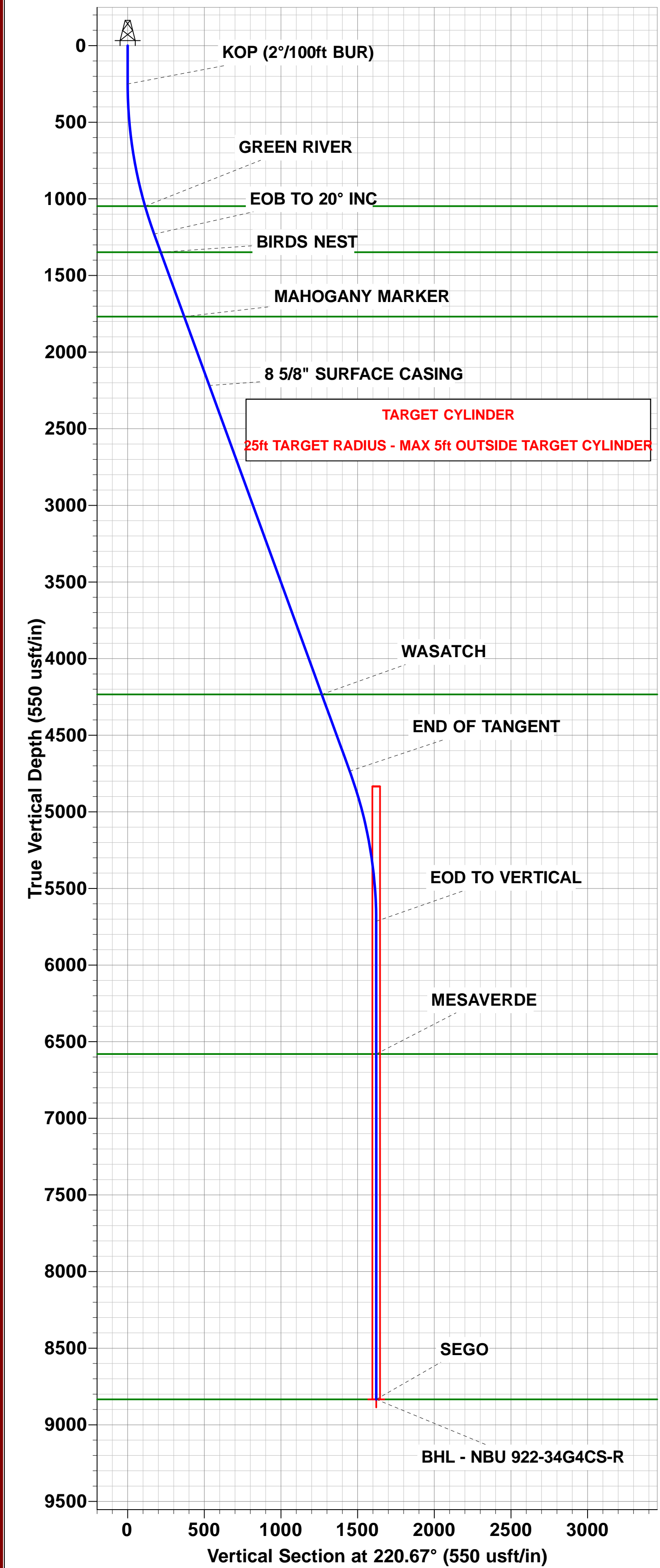
WELL DETAILS: NBU 922-34H1BS-R								<div><div><div>Azimuths to True North</div><div>Magnetic North: 10.56°</div><div>Magnetic Field</div><div>Strength: 51813.2snT</div><div>Dip Angle: 65.76°</div><div>Date: 23/09/2015</div><div>Model: IGRF2015</div></div></div>	
Ground Level: 4854.0									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.0	0.0	14528585.19	2083292.50	39° 59' 46.281 N	109° 25' 7.511 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
BHL - NBU 922-34H1BS-R	8855.0	-103.2	272.1	14528486.89	2083566.33	39° 59' 45.262 N	109° 25' 4.015 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
	200.0	200.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	549.2	550.1	7.00	110.76	-7.6	20.0	21.4	21.4	EOB TO 7° INC
	2301.0	2315.0	7.00	110.76	-83.8	221.1	236.5	236.5	8 5/8" SURFACE CASING
	2545.8	2561.7	7.00	110.76	-94.5	249.3	266.6	266.6	END OF TANGENT
	2944.9	2961.8	0.00	0.00	-103.2	272.1	291.0	291.0	EOD TO VERTICAL
	8855.0	8871.9	0.00	0.00	-103.2	272.1	291.0	291.0	BHL - NBU 922-34H1BS-R



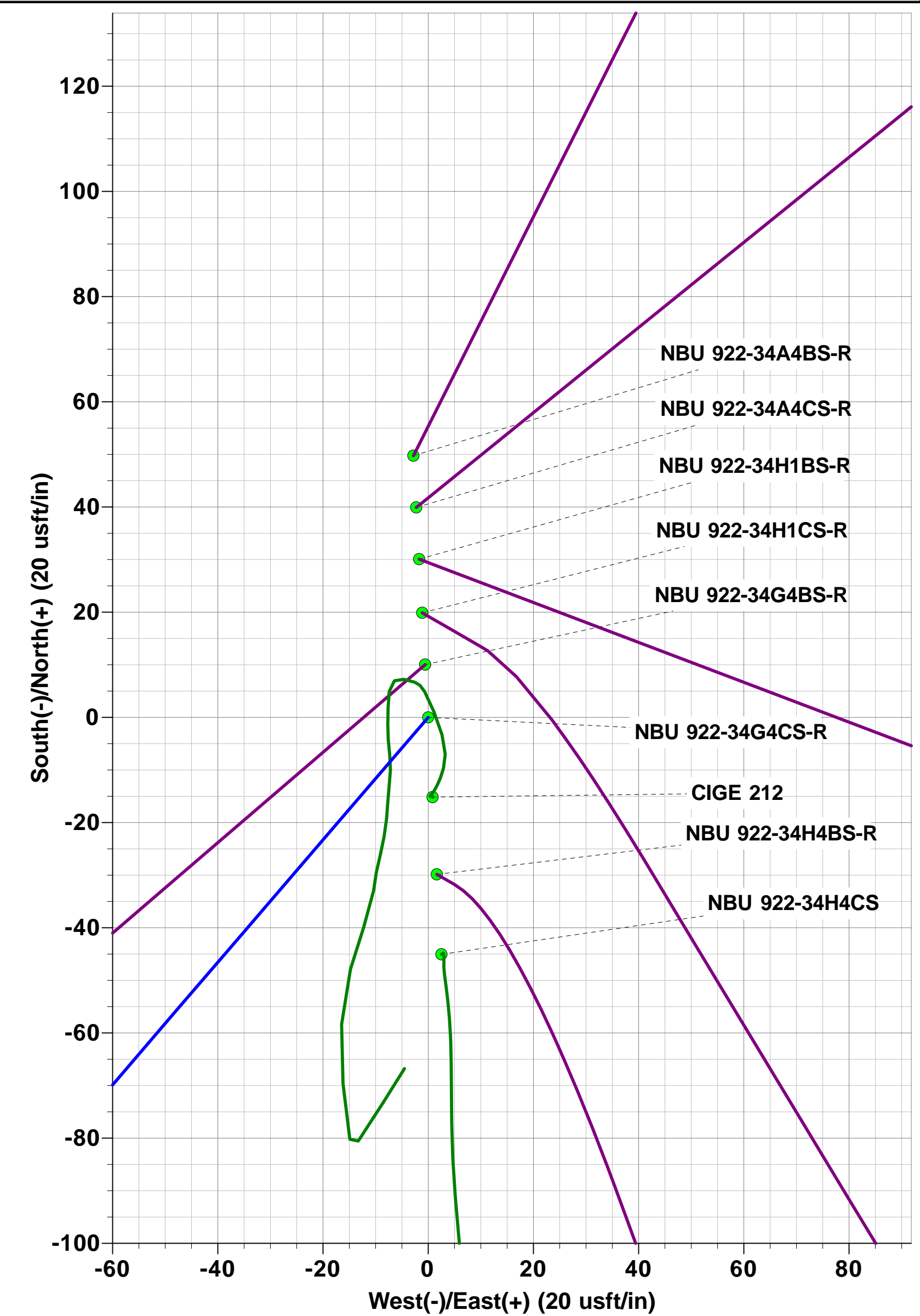




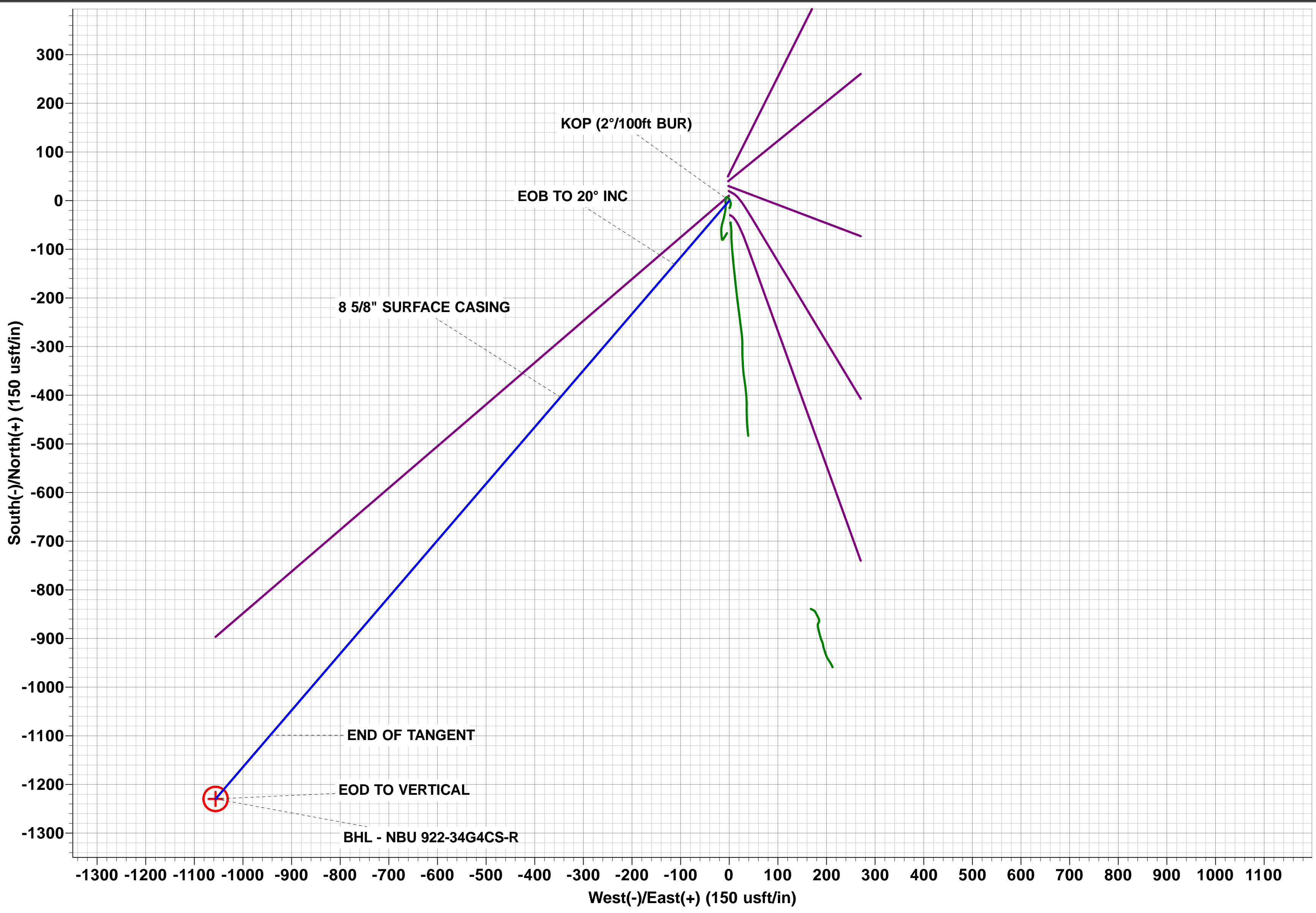
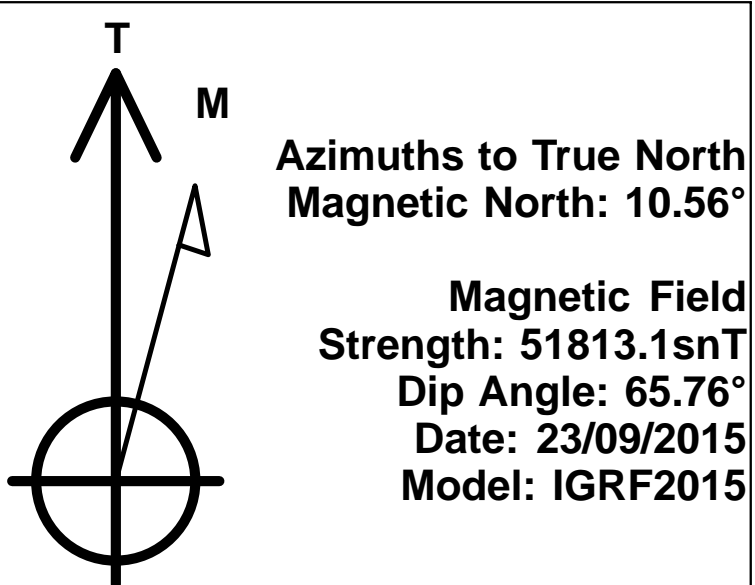
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34G4CS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1047.0	1057.7	GREEN RIVER
1348.0	1375.8	BIRDS NEST
1768.0	1822.7	MAHOGANY MARKER
4234.0	4447.0	WASATCH
6580.0	6845.3	MESAVERDE
8834.0	9099.3	SEGO



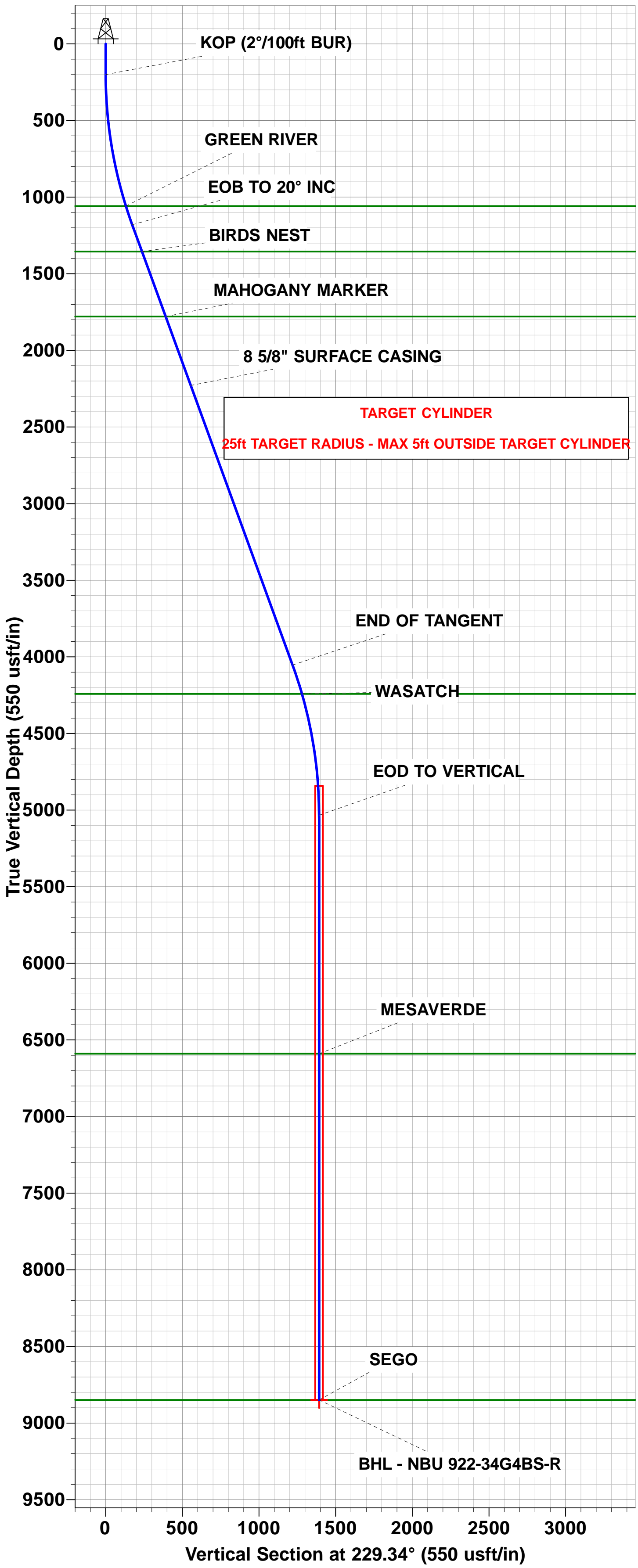
WELL DETAILS: NBU 922-34G4CS-R								<div><div><div>T</div><div>M</div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div>Azimuths to True North</div><div>Magnetic North: 10.56°</div><div>Magnetic Field</div><div>Strength: 51813.1nT</div><div>Dip Angle: 65.76°</div><div>Date: 23/09/2015</div><div>Model: IGRF2015</div></div>	
Ground Level: 4854.0									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.0	0.0	14528555.15	2083294.74	39° 59' 45.984 N	109° 25' 7.489 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
BHL - NBU 922-34G4CS-R	8834.0	-1229.6	-1056.4	14527307.18	2082260.55	39° 59' 33.832 N	109° 25' 21.061 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
	250.0	250.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	1229.9	1250.0	20.00	220.67	-131.1	-112.6	172.8	172.8	EOB TO 20° INC
	2218.0	2301.6	20.00	220.67	-403.9	-347.0	532.5	532.5	8 5/8" SURFACE CASING
	4734.1	4979.3	20.00	220.67	-1098.6	-943.8	1448.3	1448.3	END OF TANGENT
	5714.0	5979.3	0.00	0.00	-1229.6	-1056.4	1621.1	1621.1	EOD TO VERTICAL
	8834.0	9099.3	0.00	0.00	-1229.6	-1056.4	1621.1	1621.1	BHL - NBU 922-34G4CS-R



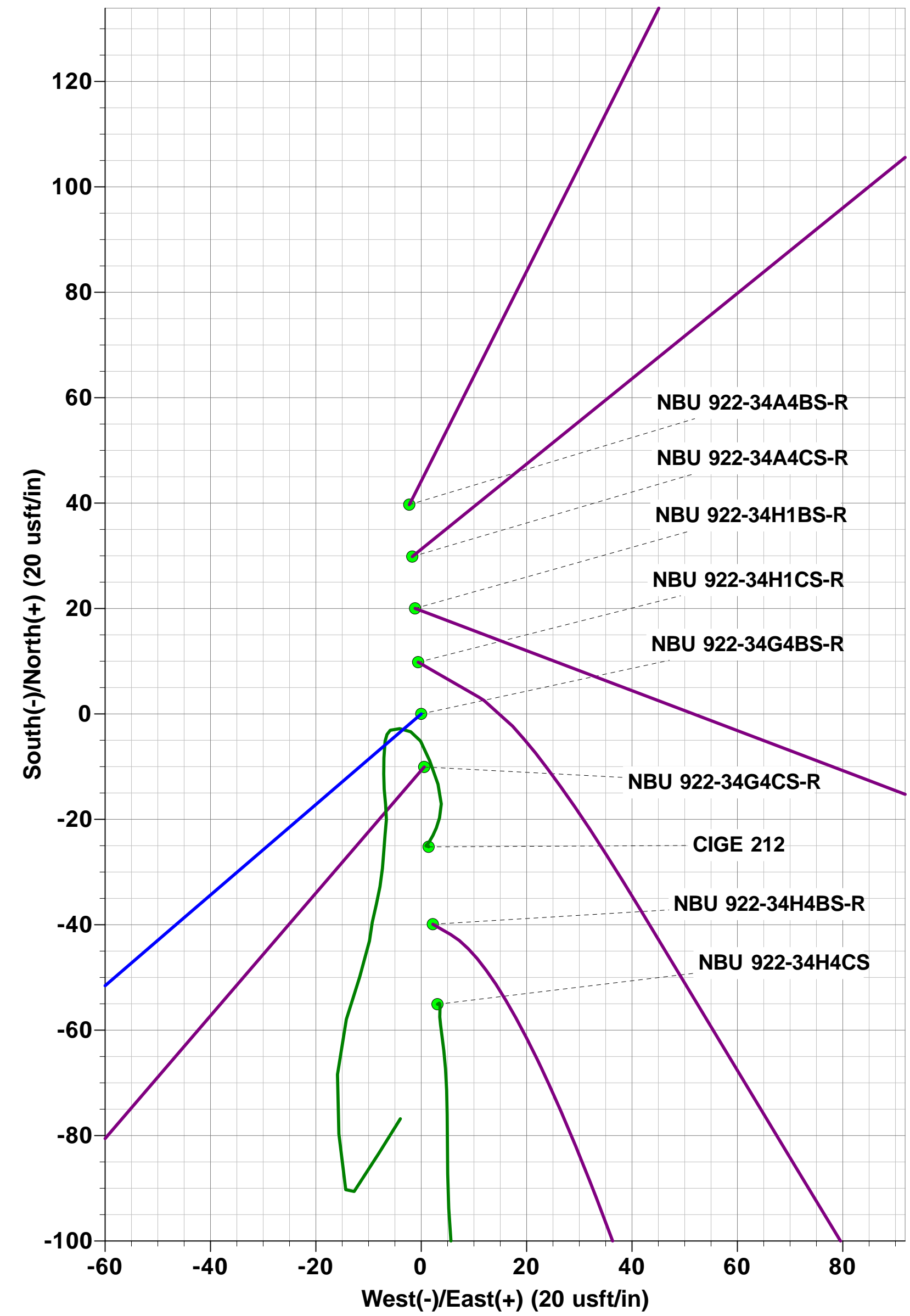




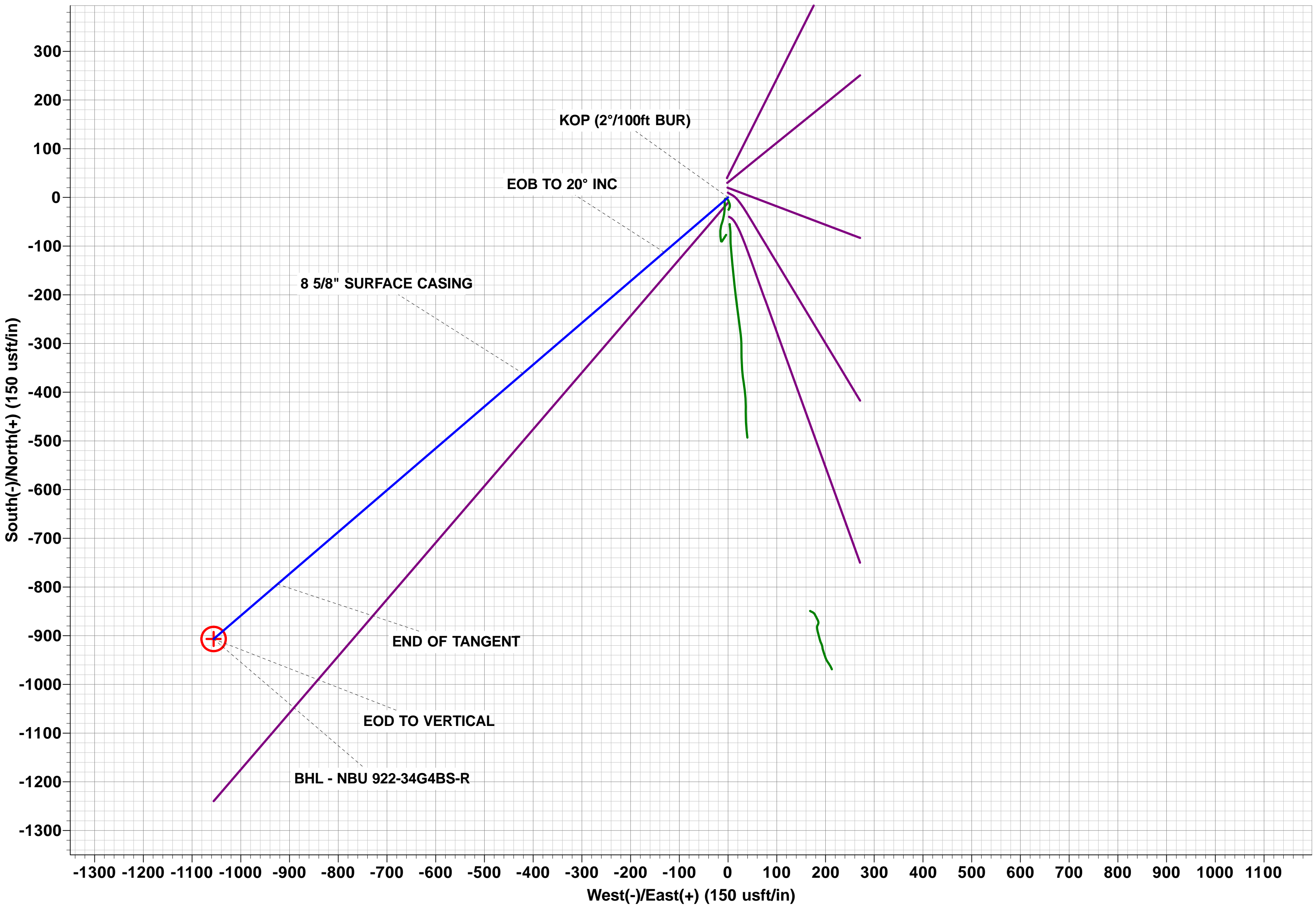
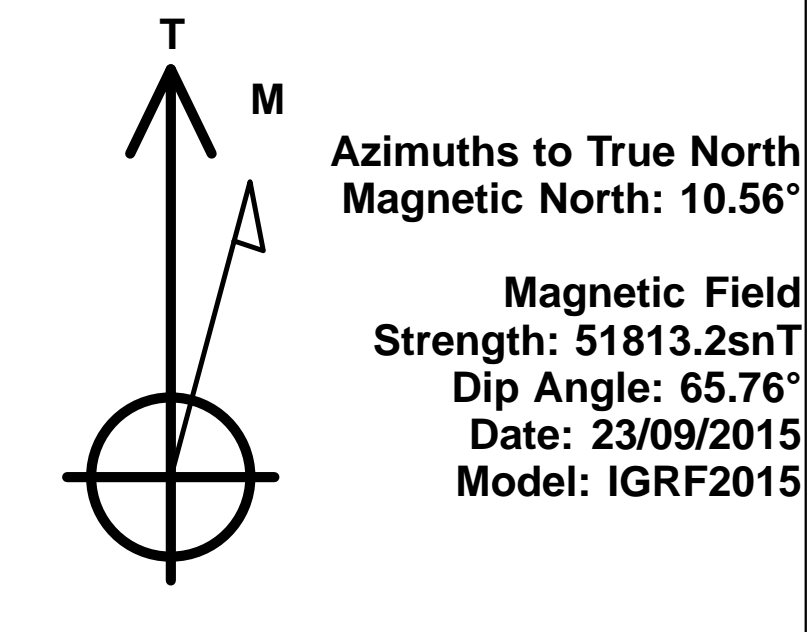
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34G4BS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1058.0	1071.4	GREEN RIVER
1355.0	1386.4	BIRDS NEST
1779.0	1837.7	MAHOGANY MARKER
4242.0	4456.4	WASATCH
6590.0	6814.9	MESAVERDE
8849.0	9073.9	SEGO



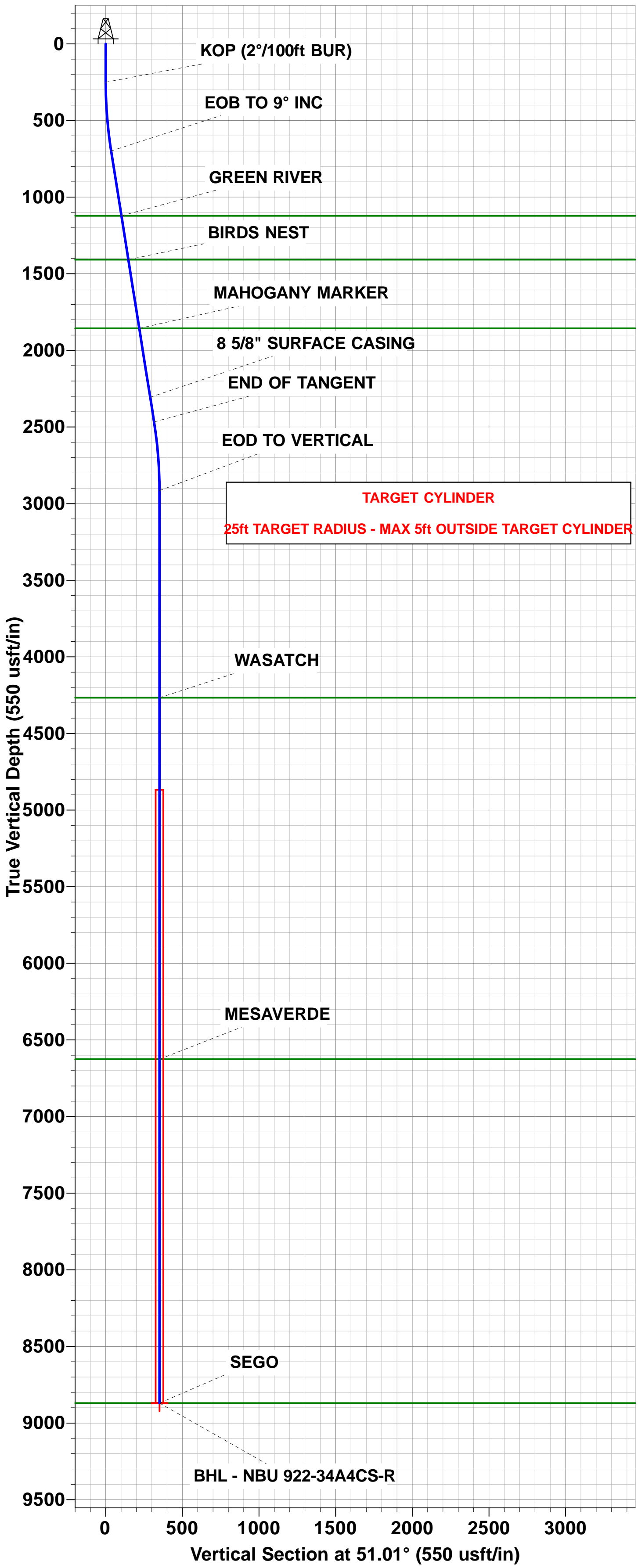
WELL DETAILS: NBU 922-34G4BS-R								
Ground Level: 4854.0								
+N/-S 0.0	+E/-W 0.0	Northing 14528565.19	Easting 2083294.01	Latitude 39° 59' 46.083 N	Longitude 109° 25' 7.496 W			
DESIGN TARGET DETAILS								
Name BHL - NBU 922-34G4BS-R	TVD 8849.0	+N/-S -906.7	+E/-W -1055.8	Northing 14527640.02	Easting 2082254.66	Latitude 39° 59' 37.122 N	Longitude 109° 25' 21.061 W	
ANNOTATIONS								
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSecDeparture	Annotation
	200.0	200.0	0.00	0.00	0.0	0.0	0.0	KOP (2°/100ft BUR)
	1180.0	1200.2	20.00	229.34	-112.6	-131.1	172.8	EOB TO 20° INC
	2229.0	2316.5	20.00	229.34	-361.4	-420.8	554.7	8 5/8" SURFACE CASING
	4053.3	4258.0	20.00	229.34	-794.1	-924.6	1218.9	END OF TANGENT
	5033.3	5258.2	0.00	229.34	-906.7	-1055.8	1391.7	EOD TO VERTICAL
	8849.0	9073.9	0.00	0.00	-906.7	-1055.8	1391.7	BHL - NBU 922-34G4BS-R



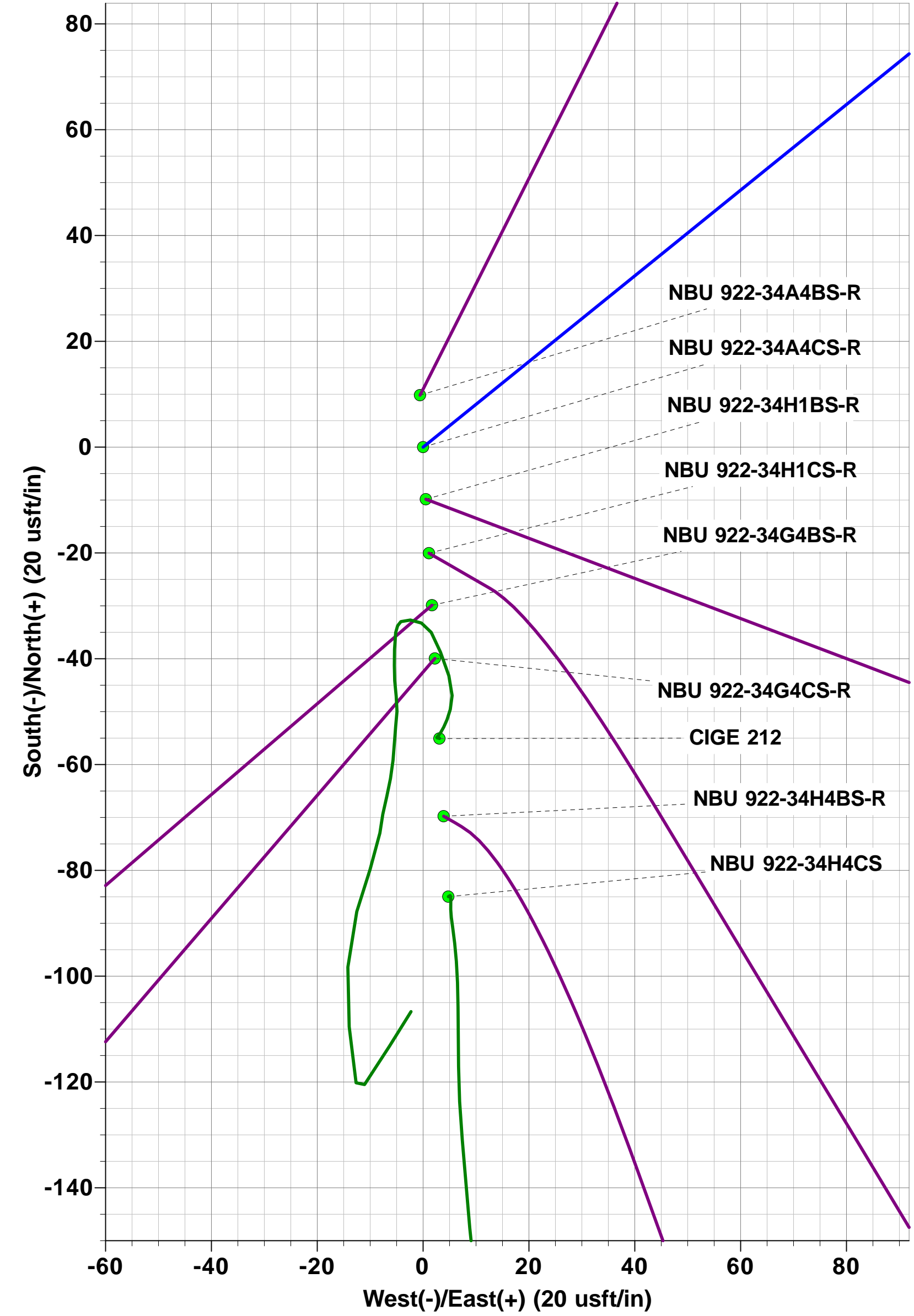




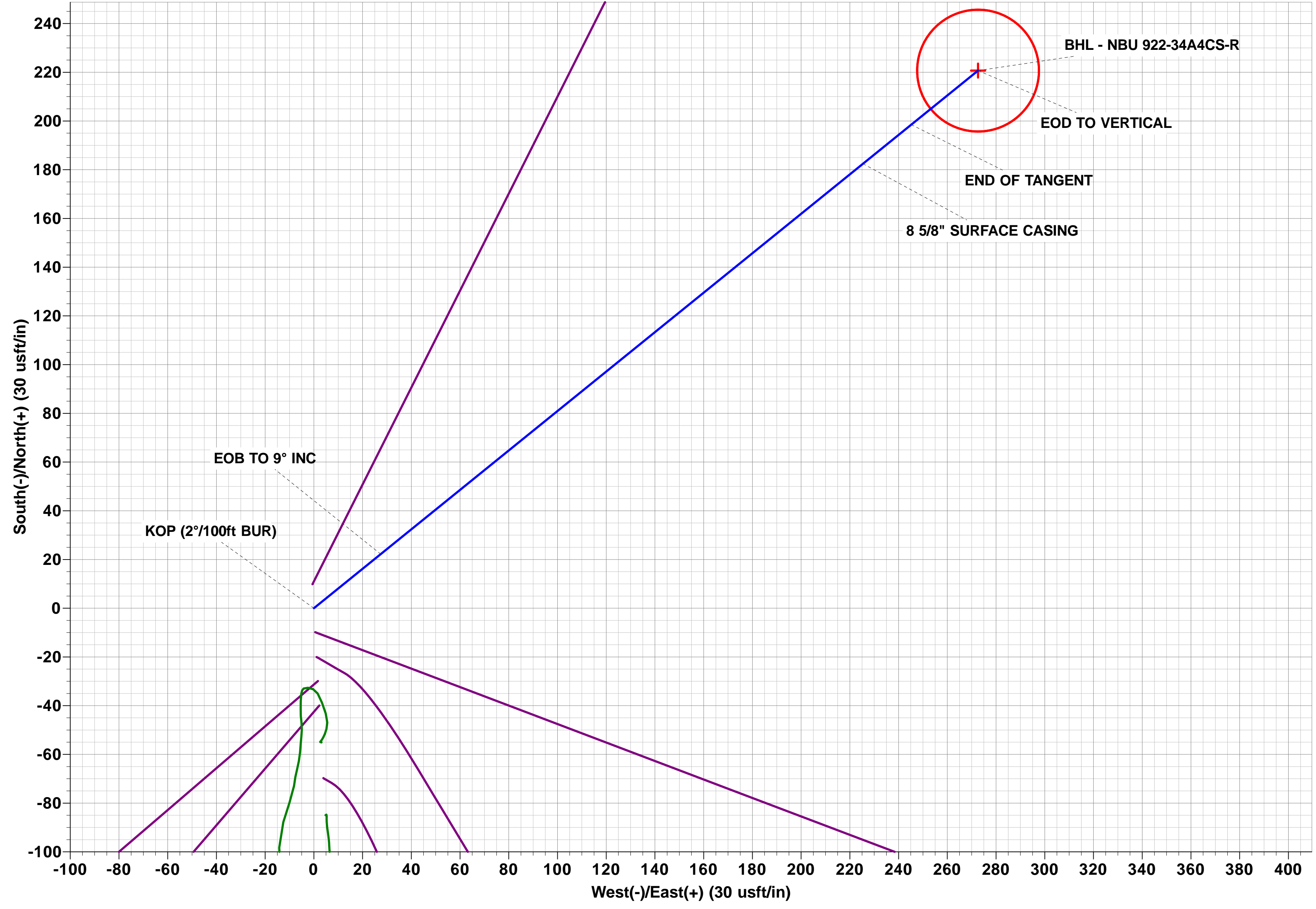
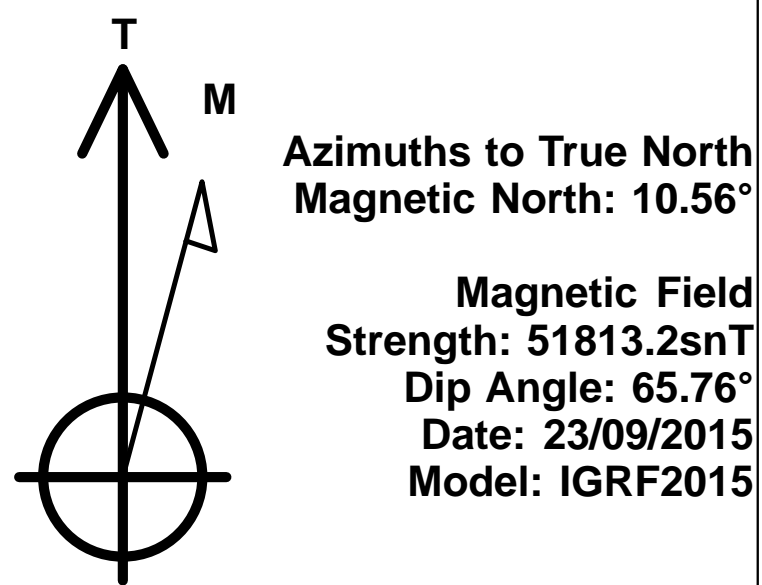
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34A4CS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPPath	MDPath	Formation
1122.0	1129.1	GREEN RIVER
1408.0	1418.7	BIRDS NEST
1856.0	1872.3	MAHOGANY MARKER
4267.0	4292.8	WASATCH
6626.0	6651.8	MESAVERDE
8870.0	8895.8	SEGO



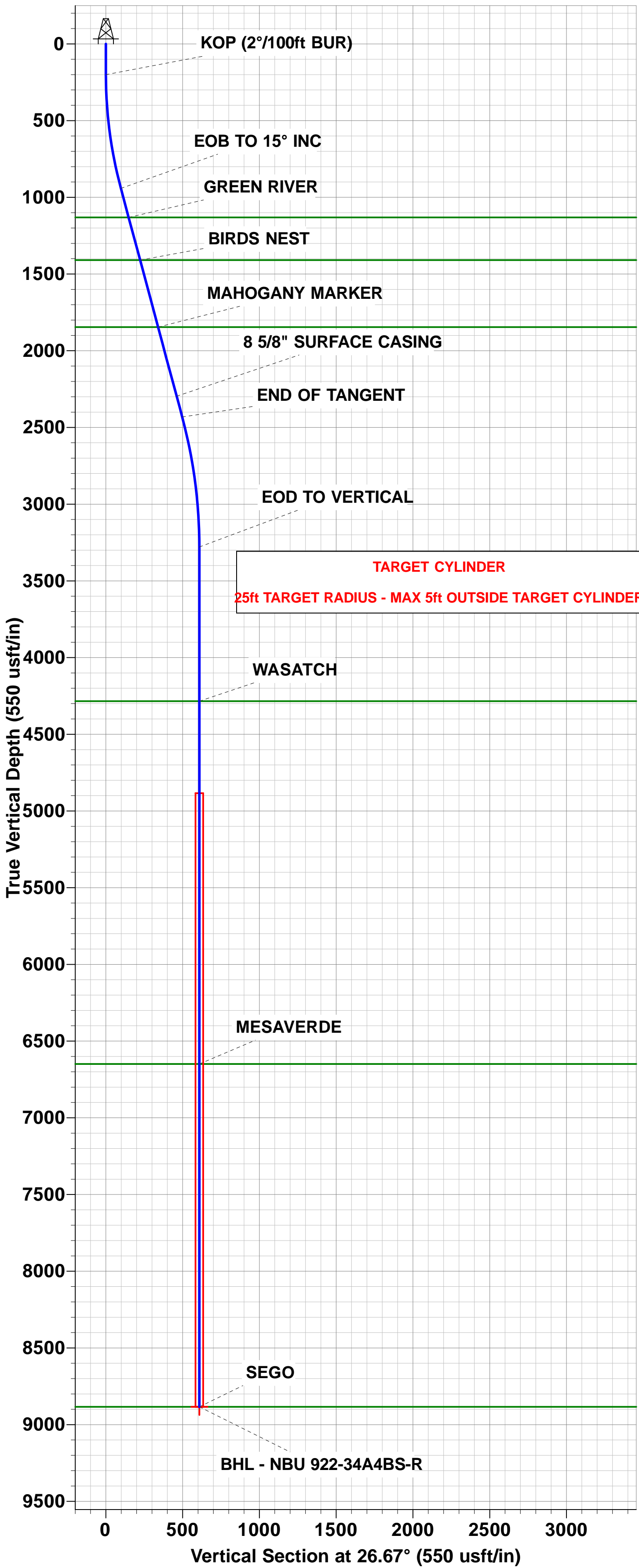
WELL DETAILS: NBU 922-34A4CS-R								<div><div><div>T</div><div>M</div><div></div></div><div><div></div><div></div><div></div></div></div> <div><div>Azimuths to True North</div><div>Magnetic North: 10.56°</div><div>Magnetic Field</div><div>Strength: 51813.2snT</div><div>Dip Angle: 65.76°</div><div>Date: 23/09/2015</div><div>Model: IGRF2015</div></div>	
Ground Level: 4854.0									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.0	0.0	14528595.02	2083291.80	39° 59' 46.378 N	109° 25' 7.518 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
BHL - NBU 922-34A4CS-R	8870.0	220.7	272.6	14528820.46	2083560.41	39° 59' 48.559 N	109° 25' 4.015 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
	250.0	250.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	698.2	700.1	9.00	51.01	22.2	27.4	35.3	35.3	EOB TO 9° INC
	2306.0	2327.9	9.00	51.01	182.4	225.4	290.0	290.0	8 5/8" SURFACE CASING
	2466.9	2490.8	9.00	51.01	198.5	245.2	315.5	315.5	END OF TANGENT
	2915.1	2940.9	0.00	0.00	220.7	272.6	350.7	350.7	EOD TO VERTICAL
	8870.0	8895.8	0.00	0.00	220.7	272.6	350.7	350.7	BHL - NBU 922-34A4CS-R



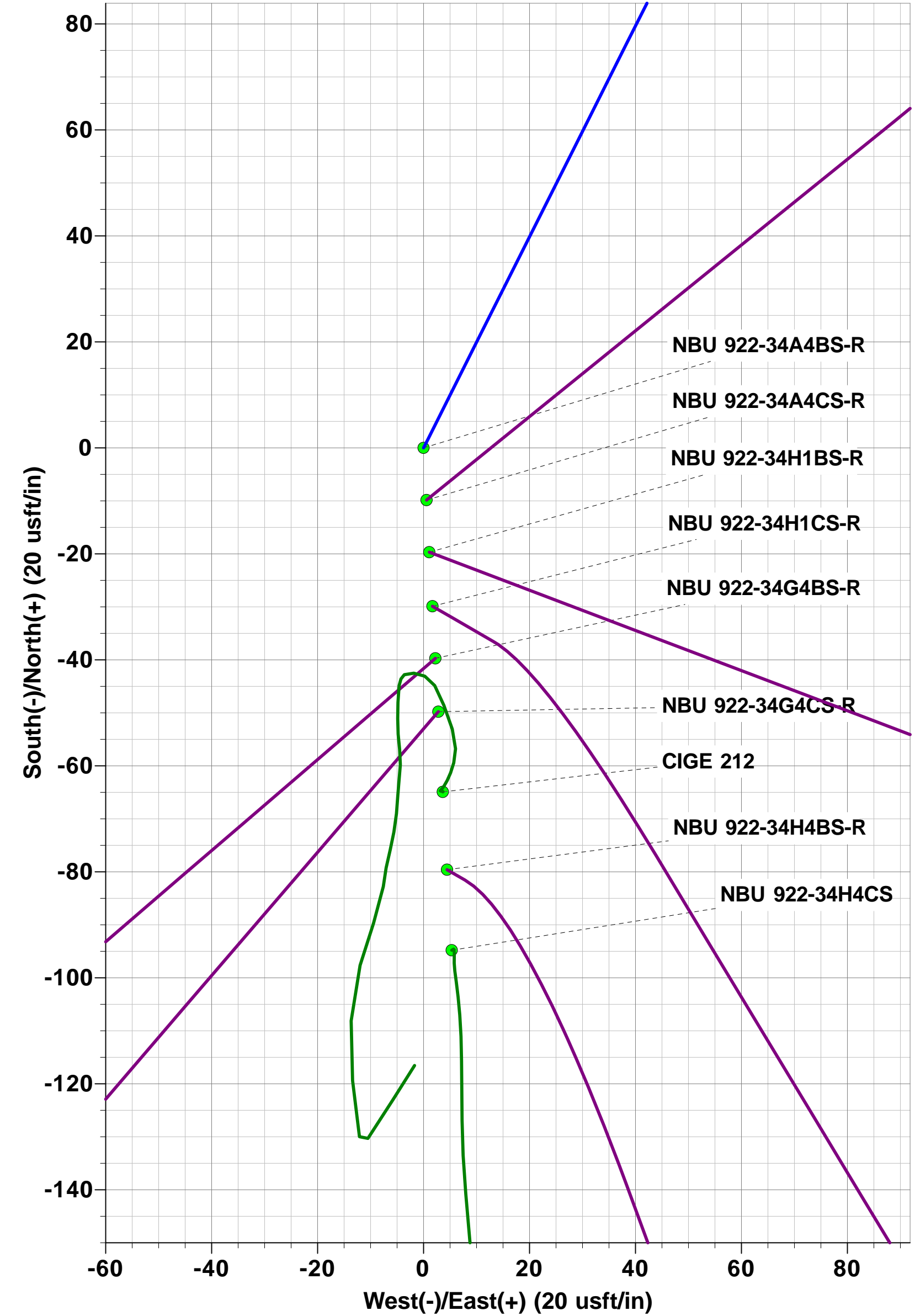




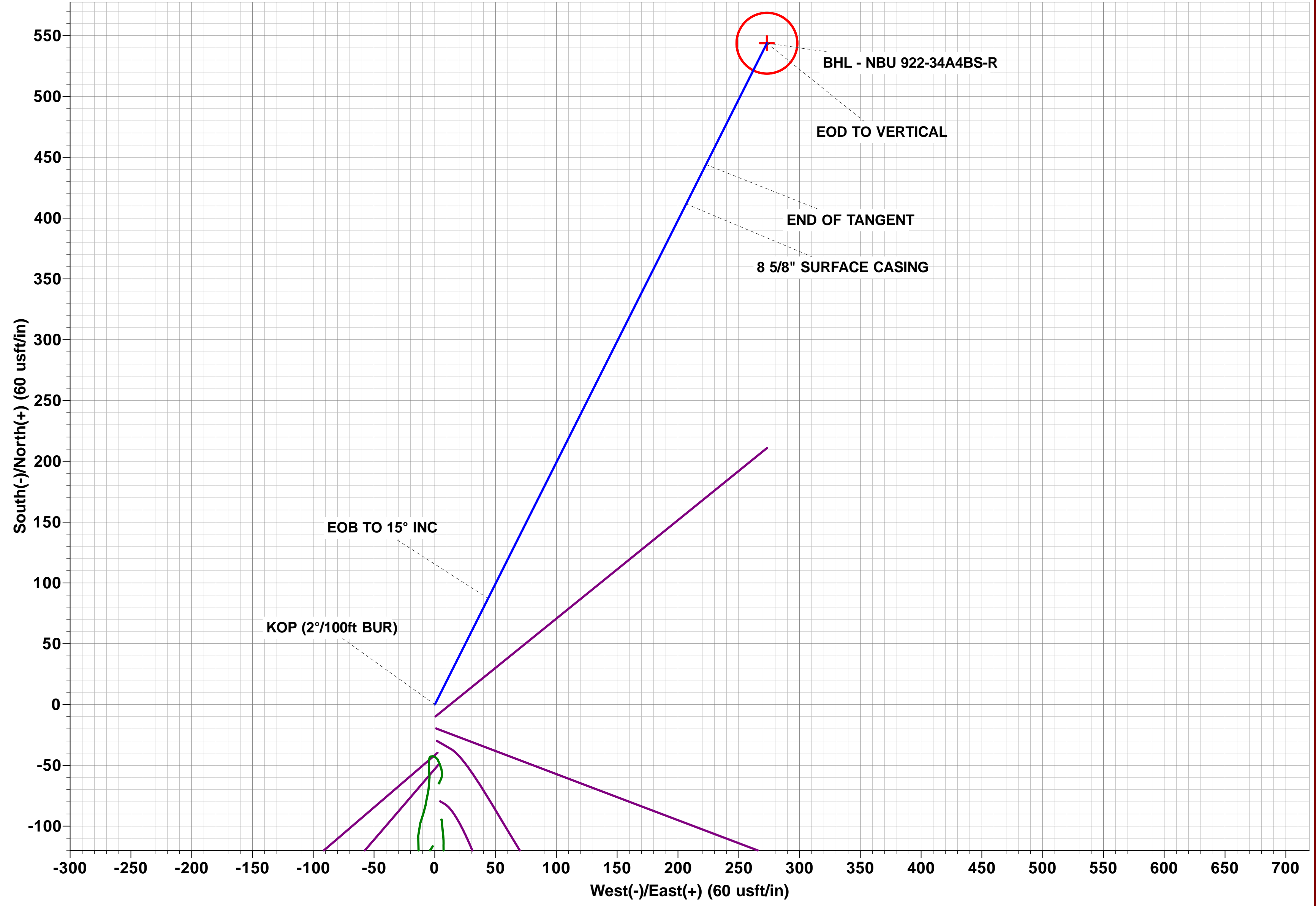
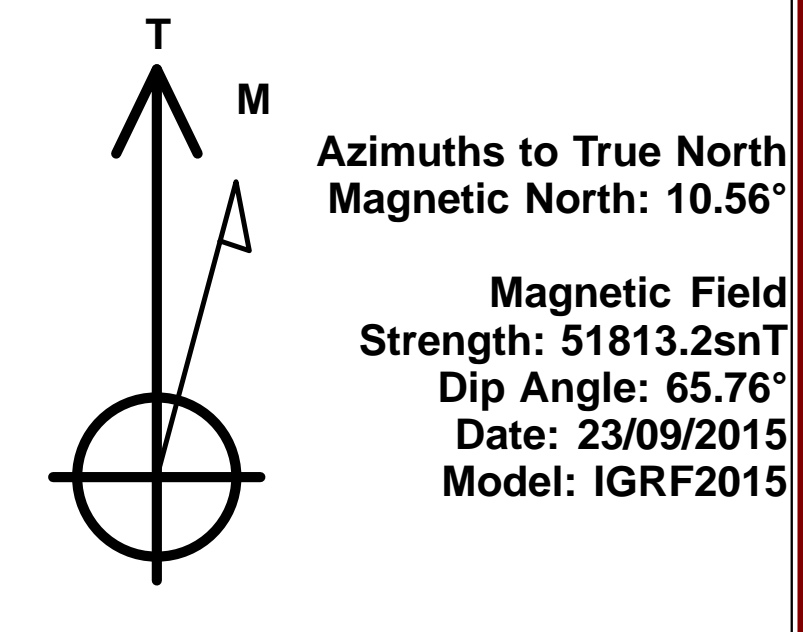
Project: UINTAH COUNTY, UTAH (NAD 27)  
Site: SEC. 34 T9S R22E (NBU 922-34H PAD)  
Well: NBU 922-34A4BS-R  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



PROJECT DETAILS: UINTAH COUNTY, UTAH (NAD 27)		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Zone 12N (114 W to 108 W)		
Padsite: SEC. 34 T9S R22E (NBU 922-34H PAD)		
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1131.0	1146.2	GREEN RIVER
1409.0	1434.0	BIRDS NEST
1846.0	1886.5	MAHOGANY MARKER
4284.0	4354.9	WASATCH
6649.0	6719.9	MESAVERDE
8884.0	8954.9	SEGO



WELL DETAILS: NBU 922-34A4BS-R									
Ground Level: 4854.0									
+N-S 0.0	+E-W 0.0	Northing 14528604.84	Easting 2083291.06	Latitude 39° 59' 46.476 N	Longitude 109° 25' 7.525 W				
DESIGN TARGET DETAILS									
Name BHL - NBU 922-34A4BS-R	TVD 8884.0	+N-S 543.8	+E-W 273.2	Northing 14529153.30	Easting 2083554.50	Latitude 39° 59' 51.850 N	Longitude 109° 25' 4.015 W		
ANNOTATIONS									
	TVD	MD	Inc	Azi	+N-S	+E-W	VSec	Departure	Annotation
	200.0	200.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (2°/100ft BUR)
	941.7	950.2	15.00	26.67	87.3	43.8	97.7	97.7	EOB TO 15° INC
	2296.0	2352.3	15.00	26.67	411.7	206.8	460.7	460.7	8 5/8" SURFACE CASING
	2431.3	2492.4	15.00	26.67	444.1	223.1	496.9	496.9	END OF TANGENT
	3278.9	3349.8	0.00	0.00	543.8	273.2	608.6	608.6	EOD TO VERTICAL
	8884.0	8954.9	0.00	0.00	543.8	273.2	608.6	608.6	BHL - NBU 922-34A4BS-R





## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/6/2015

API NO. ASSIGNED: 43047554580000

WELL NAME: NBU 922-34G4CS-R

OPERATOR: KERR-MCGEE OIL &amp; GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6828

CONTACT: Joel Malefyt

PROPOSED LOCATION: SENE 34 090S 220E

Permit Tech Review: ☒

SURFACE: 1345 FNL 0764 FEL

Engineering Review: ☒

BOTTOM: 2578 FNL 1821 FEL

Geology Review: ☒

COUNTY: UINTAH

LATITUDE: 39.99603

LONGITUDE: -109.41940

UTM SURF EASTINGS: 634930.00

NORTHINGS: 4428513.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0149077

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- ☒ PLAT
- ☒ Bond: FEDERAL - WYB000291
- ☐ Potash
- ☒ Oil Shale 190-5
- ☐ Oil Shale 190-3
- ☐ Oil Shale 190-13
- ☒ Water Permit: 43-8496
- ☐ RDCC Review:
- ☐ Fee Surface Agreement
- ☒ Intent to Commingle

Commingle Approved

## LOCATION AND SITING:

- ☐ R649-2-3.
- Unit: NATURAL BUTTES
- ☐ R649-3-2. General
- ☐ R649-3-3. Exception
- ☒ Drilling Unit
- Board Cause No: Cause 173-14
- Effective Date: 12/2/1999
- Siting: Suspends General Siting
- ☒ R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason

RECEIVED: October 26, 2015





GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 922-34G4CS-R  
**API Well Number:** 43047554580000  
**Lease Number:** UTU 0149077  
**Surface Owner:** FEDERAL  
**Approval Date:** 10/26/2015

### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### Commingling:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil



shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "John Rogers", written over a horizontal line.

For John Rogers  
Associate Director, Oil & Gas





GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

November 1, 2016

Joel Malefyt  
Kerr-McGee Oil & Gas Onshore, LP.  
1099 18th Street, Suite 600  
Denver, CO 80217

Re: APDs Rescinded for Kerr-McGee O&G Onshore, LP, Uintah County

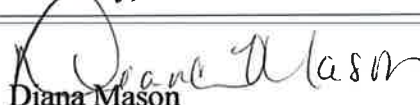
Dear Mr. Malefyt:

Enclosed find the list of APDs that you asked to be rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded as of November 1, 2016.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,



Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal





43-047-52086 Bonanza 1023-5B1CS  
43-047-52087 Bonanza 1023-5B4AS  
43-047-52088 Bonanza 1023-5C1DS  
43-047-52097 Bonanza 1023-5A1CS  
43-047-52098 Bonanza 1023-5A4CS  
43-047-52099 Bonanza 1023-5G1DS  
43-047-52100 Bonanza 1023-5H1BS  
43-047-52101 Bonanza 1023-5H4CS  
43-047-55455 NBU 922-34H4BS-R  
43-047-55456 NBU 922-34H1CS-R  
43-047-55457 NBU 922-34H1BS-R  
43-047-55458 NBU 922-34G4CS-R  
43-047-55459 NBU 922-34G4BS-R  
43-047-55460 NBU 922-34A4CS-R  
43-047-55461 NBU 922-34A4BS-R





Diana Mason <dianawhitney@utah.gov>

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## RE: Expired APDs

**Malefyt, Joel** <Joel.Malefyt@anadarko.com>  
To: Diana Mason <dianawhitney@utah.gov>

Tue, Nov 1, 2016 at 11:59 AM

Diana,

Thanks for the follow up. Those were associated with Federal APDs that were ultimately expiring. We won't be renewing those.

Thank you!

**Joel Malefyt** | UT/WY Regulatory Affairs

**Anadarko Petroleum Corporation**

**Office:** 720-929-6828

**E-mail:** joel.malefyt@anadarko.com

**From:** Diana Mason [mailto:dianawhitney@utah.gov]

**Sent:** Tuesday, November 01, 2016 11:31 AM

**To:** Malefyt, Joel <Joel.Malefyt@anadarko.com>

**Subject:** Expired APDs

Hi Joel,

There are 15 APDs that expired last month. I noticed all the one's coming in today haven't expired yet. Does Kerr McGee still want the one's that has already expired?

Thank you,

Diana